APPENDIX 1. Higher level classification of Scelionidae with host data

Kozlov 1970	Masner 1976	Austin & Field 1997	(based on type genera)
Scelioninae	**Scelioninae**	**Scelioninae**	
	Sparasionini	Sparasionini	Tettigoniidae
Caloteleini	Nixonini	Nixonini	Tettigoniidae
Baryconini	Baryconini	Baryconini	Tettigoniidae
		Scelionini s. l.	
Scelionini	Scelionini	Scelionini s. s.	Acrididae
Caloteleini	Calliscelionini	Calliscelionini	Gryllidae
Psilanteridini	Psilanteridini	Psilanteridini	Gryllidae
	Aradophagini	Aradophagini	Unknown
		Neoscelionini	Unknown
Platyscelionini	Platyscelionini	Platyscelionini	?Tettigoniidae
.	Doddiellini	Doddiellini	Unknown
	Cremastobaeini	Cremastobaeini	?Gryllidae
Mantibarini	Mantibarini	Mantibarini	Mantodea
Gryonini	Gryonini	Gryonini	Various Heteroptera, Lepidoptera
Embidobiini	Embidobiini	Embidobiini	Embiidina
Pseudanteridini			
Baeinae			
Thoronini	Thoronini	Thoronini	Nepidae
Baeini	Baeini	Baeini s. l.	Araneae
Idrini	Idrini		
Teleasinae	**Teleasinae**	**Teleasinae**	
Teleasini		Teleasini	Teleasini
Xenomerini	Xenomerini	Xenomerini	Coleoptera
Telenominae	**Telenominae**	**Telenominae**	
Telenomini	Telenomini	Telenomini	Heteroptera, Auchenorrhyncha, Lepidoptera, Neuroptera, Diptera
Aradophagini			
Tiphodytini			Gerridae

APPENDIX 2. Species examined during this study and the origin of the material

Species	Origin
Scelionidae	
Apegus sp. (2)	Hungary
Archaeotelia sp. (7)	Chile
Baeus seminulum (1)	Hungary
Baryconus sp. (2)	South Africa
Baryconus sp. (3)	Hungary
Calliscelio sp. (1)	South Africa
Calloteleia sp. (4)	South Africa
Calloteleia sp. (5)	Chile
Doddiella sp. (1)	Republic of Congo
Dyscritobaeus sp. (1)	Thailand
Dyscritobaeus sp. (1)	South Africa
Eremioscelio cydnoides (1)	Hungary
Eremioscelio sp. (1)	China
Gryon misellum (4)	Hungary
Gryon sp. (1)	China
Gryon sp. (3)	South Africa
Idris flavicornis (1)	Hungary
Idris sp. (1)	South Africa
Macroteleia sp. (1)	Hungary
Neoscelio	Australia
Nixonia sp. (4)	South Africa
Paratelenomus saccharalis (3)	South Africa
Psilanteris bicolor (3)	Hungary
Psix sp. (2)	South Africa
Scelio sp. (12)	Hungary
Scelio sp. (4)	South Africa
Sparasion sp. (4)	China
Sparasion sp. (6)	Hungary
Teleas lamellatus (4)	Hungary
Telenomus chloropus (6)	Hungary
Telenomus sp. (2)	South Africa
Thoron metalicus (1)	Hungary
Tiphodytes gerriphagus (2)	Italy
Trichotelia sp. (2)	Thailand
Trimorus flavipes (3)	Hungary
Trimorus hungaricus	Hungary
Trimorus opacus (3)	Hungary
Trimorus sp. (2)	South Africa
Trimorus varicornis (2)	Hungary
Trissolcus semistriatus (4)	Hungary
Trissolcus sp. (4)	South Africa
Xenomerus sp. (2)	South Africa
Other Hymenoptera	
Andricus lignicolus (Cynipidae) (4)	Hungary
Belytha sp. (Diapriidae) (3)	Hungary
Evaniella semaeoda (Evaniidae) (4)	USA
Helorus sp. (Heloridae)(2)	Hungary
Pelecinus politurator (Pelecinidae) (3)	USA
Pristaulacus strangaliae (Aulacidae) (2)	USA
Proctotrupes gravidator (Proctotrupidae) (6)	Hungary
Pseudophoenus sp. (Gasteruptiidae) (4)	Australia
Trichopria sp. (Diapriidae) (2)	Hungary
Vanhornia eunemidarum (Vanhorniidae) (3)	USA

APPENDIX 3. List of institutions where from *Xenomerus* specimens were borrowed (names of curators are in paranthesis following institutions)

BMNH The Natural History Museum, London, United Kingdom (S. Rider)

CNCI Canadian National Collection of Insects, Agriculture and Agri-Food Canada, Ottawa, Canada (J. Huber/A. Bennett)

FBIN Collection of F. Bin, Universitá di Perugia, Perugia, Italy (F. Bin)

HNHM Hungarian Natural History Museum, Budapest, Hungary (S. Csősz)

NHMW Naturhistorisches Museum, Vienna, Austria (S. Schödl/F. Zettel)

NHRS Naturhistoriska Riksmuseet, Stockholm, Sweden (B. Viklund)

NMSA Natal Museum, Pietermaritzburg, South Africa (M. Mostovski)

SAMA South Australian Museum, Adelaide, South Australia, Australia (J. Forrest)

SAMC South African Museum, Cape Town, South Africa (S. van Noort)

SANC South African National Collection of Insects, Pretoria, Republic of South Africa (G. Prinsloo)

UASK Zoological Institute, Ukrainian Academy of Sciences, Kiev, Ukraine (S. V. Kononova)

USNM United States National Museum, Washington, D.C., USA (M. Gates)

ZMAS Zoological Museum, USSR Academy of Sciences, St. Petersburg, Russia (M. A. Kozlov)

APPENDIX 4 List of abbreviations used for figures25

abbreviation	term	figures	reference	synonyms
aal	antero-admedian line	16, 17, 69, 75, 80	Ronquist & Nordlander 1989	
ac	acetabular carina	10, 11, 12, 16, 35, 74, 94, 96, 99, 100, 134	Johnson 1984	
acra	acropleural apodeme*	12, 71, 101, 106		
act	acetabulum	10, 11, 16, 35	Richards 1977	=procoxal depression *sensu* Krogmann & Vilhelmsen 2006
adi	antero-dorsal incision of mesopleuron*	12, 76, 100		
amc	transmetanotal carina	17 – 19, 86, 88, 97, 98, 126, 130, 131, 136, 137	Duncan 1939	
amem	anterior extension of mesofurca*	10, 12, 108, 112–115		
amsp	anterior margin of the speculum*	10, 12, 101, 103, 104, 106, 112		=pleural ridge *sensu* Snodgrass 1942; =second mesopleural apodeme *sensu* Duncan 1939
anfo	antennal foramen	1	Ronquist & Nordlander 1989	=toruli *sensu* Masner 1980, Yoder 2004
anwp	anterior notal wing process	9, 17, 18, 75, 77, 79	Gibson 1985	
aoc	anterior ocellus	1	Masner 1980	
aph1	ventral apodeme of the first phragma*	9, 66, 71, 73		=55 *sensu* Ronquist & Nordlander 1989
apr	anterior process of the pronotum*	35, 38, 47		
aprl	anterior profurcal lamella	3, 5, 6, 39, 40, 44	Vilhelmsen & Krogmann 2006	=a6 *sensu* Vilhelmsen 2000b; =inner process of first furcal arm *sensu* Duncan 1939
arp	anterior rim of pronotum	16, 19, 48, 56	Ronquist & Nordlander 1989	
asc	antennal scrobe	1, 23	Ronquist & Nordlander 1989	=speculum *sensu* Masner & Denis 1996
asu	acropleural sulcus	19, 76, 94, 96, 97, 100, 105, 107	Gibson 1986	
atp	anterior tentorial pit	28	Ronquist & Nordlander 1989	
ats	postacetabular sulcus*	16, 19, 35, 94, 96, 99, 100, 134		=acetabular foveae *sensu* Johnson 1984
auc	axillular carina	9, 17–19, 78, 86, 93, 95, 96	Gibson 1985	
axc	axillar carina	9, 17, 18, 76, 77, 79, 88, 90, 91, 93, 95, 96	Gibson 1985	
axu	axillula	9, 17–19, 74, 78, 79	Gibson 1985	
ba2	mesobasalare	10, 12, 76, 101	Gibson 1985	
bstr	basisternum	4–6, 37, 38, 41, 45	Snodgrass 1942	
chm	chamber of the metanotum*	126, 144, 151		
cly	clypeus	1, 23, 25	Masner 1980	
cpa	cervical pronotal area*	16, 19, 49, 56, 59, 61		
crva	cervical apodeme	4, 5, 42, 44, 46	Vilhelmsen 2000b	
ctk	central keel	1, 23, 25	Masner 1980	
cvpr	cervical prominence	4, 5, 16, 35	Ronquist & Nordlander 1989	
daa	dorsal axillar area	9, 17–19, 76, 77, 79, 88, 90, 93, 95, 96	Ronquist & Nordlander 1989	
dip	dorsal incision of the propleuron*	4		
dipr	dorsal incision of the pronotum*	48–50		
dma	dilator muscle apodeme*	132		=peg like invagination *sensu* Duncan 1939
dmfl	dorsal metafurcal lamella*	13, 132, 141		
dmi	dorsal mesopleural inflection	10, 94, 103, 108		
dmpa	dorsal metapleural area*	18, 19, 96, 129, 131, 138		
dmpi	dorsal mesopostnotal incision*	120, 125		
dpa	dorsal pronotal area*	7, 16, 19, 39, 48, 49, 56, 105		
dpi	dorsal pronotal inflection	8, 50, 52–54, 60	Ronquist & Nordlander 1989	

dpin	dorsal propodeal inflection*	15, 128		
dpl	dorsal propleural area*	3, 5, 40		
dpnr	dorsal mesopostnotal flange	125	Ronquist & Nordlander 1989	
dprl	dorsal profurcal lamella	3, 5, 6, 37, 40, 41, 45	Vilhelmsen 2000b	
dscl2	discrimenal lamella (mesopectus)	12, 104	Krogmann & Vilhelmsen 2006	
dscl3	discrimenal lamella (metapectus)	14, 104, 145, 147	Krogmann & Vilhelmsen 2006	
dscr2	discrimen (mesopectus)	134	Ronquist & Nordlander 1989	=mesodiscrimenal line *sensu* Krogmann & Vilhelmsen 2006
dscr3	discrimen (metapectus)	99, 134	Ronquist & Nordlander 1989	=metadiscrimenal line sensu Krogmann & Vilhelmsen 2006
epax	anterior extension of the preaxilla*	48, 75		
epc	epomial carina	7, 16, 19, 48, 49, 51, 56, 61	Masner 1980	
epl	epicoxal lobe*	3, 16, 19, 35		
epsr	epistomal ridge	1, 34	Ronquist & Nordlander 1989	
fas	facial striae*	1, 23, 25		
fdp	frontal depression	22, 24	Masner 1980	
fed	femoral depression	19, 74, 94, 96, 97, 99, 100, 105, 107	Gibson 1997	=mesopleural depression *sensu* Masner 1979b
fld	frontal ledge	21	Masner 1980	
fos	fossa	2, 30–32	Masner 1983	
frb	mesofurcal bridge	10, 11, 108–110, 113, 116, 117	Heraty *et al*. 1994	
fro	frons	1	Huber & Sharkey 1993	=upper face *sensu* Gibson 1997
frp	frontal patch*	1, 23		
fu1a	profurcal arm	3, 5, 6, 40, 41, 45	Vilhelmsen 2000b	
fu2	mesofurca	11, 12, 108–110, 113	Ronquist & Nordlander 1989	
fu3	metafurca	14, 15	Vilhelmsen 2000a	
fup2	mesofurcal pit	12, 99, 134	Ronquist & Nordlander 1989	
fust	furcasternum	4–6, 37, 41, 45	Snodgrass 1942	
gen	gena	1, 2	Huber & Sharkey 1993	
gnp	genal patch*	2, 30		
hcxd	hind coxal depression*	18, 99, 134, 137, 138, 140		
hmsc	humeral sclerite of the metanotum	89, 121, 123–125, 142, 144	Duncan 1939	=independent sclerite *sensu* Snodgrass 1942, =X *sensu* Bucher 1948
hy	hypostoma	2, 31	Ronquist & Nordlander 1989	
hyc	hyperoccipital carina	2	Masner 1979a	
hyp	postgenal pit*	2, 30, 32		=hypostomal pit *sensu* Bin & Dessart 1983
hys	hypostomal sulcus	2, 30, 31	Vilhelmsen 1999	
hyst	hypostomal tooth*	2, 30, 32		
iap	interantennal process	1, 20, 21, 23, 25, 26	Masner 1980	
ics	interocellar space	1	Masner 1980	
laa	lateral axillar area	9, 17, 19, 76, 77, 79, 88, 90, 93, 95, 96	Ronquist & Nordlander 1989	=lateral panel *sensu* Krogmann & Vilhelmsen 2006
lapa	anterior extension of lateral axillar area*	9, 67, 79, 85, 87, 89, 90, 91–93, 121, 123		
lapr	lateral articulation process*	5, 6, 37		
lbp	lateral basisternal projection*	4–6, 37, 38, 41, 45		
lbr	labrum	1, 26, 28	Gordh & Headrick 2001	
lbrs	labral setae	1, 26	Yoder 2004	
lcp	longitudinal carina of the propleuron*	3, 36		=ventrolateral carina *sensu* Krogmann & Vilhelmsen
ldl	longitudinal line of the dorsal profurcal lamella*	3, 5, 6, 45		
ldpp	anterolateral depression of the petiole*	153, 155		

lmfa	lateral mesofurcal arm	10–12, 108–110, 113, 115	Heraty *et al*. 1994	
lmms	lateral margin of mesoscutum*	9, 17		
lmsp	lateral mesoscutal spine*	74, 75, 94, 95		
loc	lateral ocellus	1	Masner 1980	
lpa	lateral pronotal area*	16, 19, 49, 56, 59, 61		
lpal	lateral propleural area*	3, 5, 6, 36		
lpar	lateral propodeal area	18, 129, 131, 133, 135–137, 140	Ronquist 1995	
lpc	lateral propodeal carina	15, 18, 19, 129, 131, 133, 135, 136–39, 140	Ronquist & Nordlander 1989	
lph2	mesolaterophragma	118–120, 122	Heraty *et al*. 1994	
maa	mandibular adductor muscle apodeme	2, 21	Ronquist & Nordlander 1989	
mas	malar sulcus	1, 23, 25	Gibson 1997	
maxl	maxilla	2, 30–32	Ronquist & Nordlander 1989	
mbp	anterior process of the prosternum	5, 6, 35, 37, 45	Duncan 1939	
mbpm	muscle bearing process of the metanotum	124, 126, 132, 142, 144, 151	Duncan 1939	=lever of the metanotal ramus *sensu* Alam 1951
mc	mesopleural carina	19, 36, 94, 96, 97, 99	Masner 1979b	
mcp	mid coxal depression*	10, 99, 134		
mdb	mandible	1, 2, 21, 156, 157	Gordh & Headrick 2001	
meer	mesepimeral ridge	10–12, 106–115	Ronquist & Nordlander 1989	=posterior marginal ridge of mesopleuron *sensu* Snodgrass 1942; =third mesopleural apodeme *sensu* Duncan 1939
mees	mesepimeral sulcus*	19, 36, 74, 94, 96, 97, 100, 105, 107, 136		=postepimeral foveae *sensu* Johnson and Masner 1985; =recurrent grove of mesopleuron *sensu* Snodgrass 1939
mepi	posterior mesepimeral inflection	11, 12, 106, 108–110, 112–115	Ronquist & Nordlander 1989	
meps	metapleural epicoxal sulcus*	18, 19, 131, 134,		
mes	mesoleural epicoxal sulcus*	16, 19, 96, 99, 100, 134		
metd	metasomal depression*	18, 129, 131, 133, 135, 137, 138, 140		=median propodeal area *sensu* Ronquist 1995
mlr	malar region	1	Masner 1980	
mml	median mesoscutal line	17, 18, 82, 83	Gibson 1985	=median mesoscutal sulcus *sensu* Krogmann & Vilhelmsen 2006
mns	metanotal trough	17–19, 98, 105, 130, 131, 136, 137	Ronquist & Nordlander 1989	
mnsp	metanotal spine*	17, 18, 88, 97, 98		
mpfb	anterior process of the mesofurcal bridge	10, 117	Duncan 1939	
mpit	metapleural pit*	18, 19, 96, 131, 133, 139, 140	Krogmann & Vilhelmsen 2006	
mppt	metapleural apodeme	13, 15, 132, 141–144, 148, 150, 152	Vilhelmsen 2000a	
mprg	metapleural ridge	13–15, 132, 144, 149, 152	Vilhelmsen 2000a	
mpxc	metapleural epicoxal carina*	18, 19, 94, 96, 99, 134, 140		
msct	metascutellum	17–19, 98, 105, 131, 133, 137	Vilhelmsen 2000a	=dorsellum *sensu* Gibson 1997, Masner 1980, Ronquist 1995, Yoder 2004
mshs	mesoscutal humeral sulcus	9, 17–19, 72, 75, 83, 84	modified after Masner 1991	
msp1	propodeal spiracle	15, 18, 19, 129, 133, 135–137, 139	Ronquist & Nordlander 1989	
mspb	median sulcus of the postgenal bridge*	2, 31		=conjunction line *sensu* Mineo & Villa 1982; =hypostomal line *sensu* Masner 1983
mtad	metepisternal depression	13, 14, 99, 134, 142–144, 151	Vilhelmsen 2000a	
mtam	metapleural arm	13, 18, 19, 129, 131, 139, 141, 143, 146, 152	Vilhelmsen 2000a	
mtfa	metafurcal arm	13–15, 132, 141–144	Vilhelmsen 2000a	
mtnr	internal metanotal ridge*	126, 127, 132, 142, 144		
mtp	metapleural triangle	19, 96	Johnson 1996	

mtpc	metapleural carina	18, 19, 129, 131, 133–140	Johnson 1984	
mtps	metapleural sulcus	18, 19, 96, 129, 131, 133, 134, 136–140	Vilhelmsen 2000a	
mtsr	metascutellar carina*	86, 88, 98, 131, 133		
nea	netrion apodeme	8, 50, 52, 53, 57, 58, 64, 65	Gibson 1985	
nes	netrion sulcus	7, 16, 49, 51	Masner 1979b	
net	netrion	7, 16, 19, 35, 36, 48, 49, 51, 96, 97, 105	Masner 1979b	
not	notauli	9, 17–19, 75, 80, 82, 83, 84		
obb	orbital band	22	Johnson 1984	
obc	orbital carina	1, 25	Johnson & Masner 1985	
occ	occipital carina	2, 30, 32, 33	Masner 1980	
ocf	occipital foramen	2, 30, 32	Vilhelmsen 1999	
ocp	occiput	2	Gibson 1997	
ocy	occipital condyle	2, 30–32	Vilhelmsen 1999	
oma	occlusor muscle apodeme	50, 52, 58, 59	Gibson 1985	
orf	oral foramen	1, 2, 156	Ronquist & Nordlander 1989	
pa	pleural apodeme*	10, 12, 64, 65, 67, 101–104, 106, 118		=pleural apophysis *sensu* Snodgrass 1942; = mesopleural apophysis *sensu* Alam 1951, Dhillon 1966
pap	postalar process	9, 17–19, 75, 77, 78, 84, 86–92, 123, 124	Ronquist & Nordlander 1989	=posterior wing process
papc	postacetabular patch*	19, 35, 96, 100, 134		=acetabular field *sensu* Johnson 1984
pax	preaxilla	9, 17, 19, 72, 74–79	Gibson 1985	
pcs	propleural cervical sulcus*	3, 16, 19, 35, 36		
pcxr	paracoxal ridge	13–15, 67, 132, 141–146, 151	Vilhelmsen 2000a	
pcxs	paracoxal sulcus	19, 99, 105, 131, 133, 138, 140	Vilhelmsen 2000a	
pdem	posterodorsal edge of the mesopleuron*	10–12, 101, 103, 106, 108–110, 113, 115		
pdep	posterodorsal edge of pronotum*	8, 48, 52–54, 97, 105		
pep	posterior extension of preaxilla*	9, 17, 85, 123		
pes	propleural epicoxal sulcus*	3, 16, 19, 35		
pfa	propleural arm	3, 40, 41	Ronquist & Nordlander 1989	
pfu3	metafurcal pit	18, 129, 134	Ronquist & Nordlander 1989	
pg	postgena	2	Gibson 1997	
pgb	postgenal bridge	2, 30–32	Vilhelmsen 1999	
ph1	first phragma	9, 66, 68–72, 78, 122	Ronquist & Nordlander 1989	
ph2	second phragma	78, 87, 89, 120–122, 125, 142, 144	Ronquist & Nordlander 1989	
ph3	third phragma	13, 15, 128, 132, 141, 143–146, 151, 152	Ronquist & Nordlander 1989	
pla	plical area	18, 136, 140	Gibson 1997	
plc	plica	18, 19, 136, 140	Gibson 1997	
plsf	pleurostomal fossa	2, 26, 28	Ronquist & Nordlander 1989	
plsr	pleurostomal ridge	1, 34	Ronquist & Nordlander 1989	
plwa3	metapleural wing articulation	15, 124, 128, 141, 146	Duncan 1939	
pmma	posterior mesepimeral area*	19, 36, 74, 96, 97, 100		=mesepimeron *sensu* Masner 1979b
pnap	axillary lever	87, 89, 118, 119, 120–123, 125	Heraty *et al*. 1994	
pnwp	posterior notal wing process	9, 17, 77, 90, 91, 93	Gibson 1986	
pos	postgenal sulcus*	2, 30, 32		=postoccipital sulcus *sensu* Mineo & Villa 1982, =hypostomal sulcus *sensu* Masner 1983
posu	postocciput	2	Ronquist & Nordlander 1989	
pp	pleural pit	19, 94, 96, 97, 100, 107	Masner 1979b	
ppi	posterior pronotal inflection	8, 48, 50, 52–55, 60, 62	Gibson 1985	

ppp	posterior propodeal projection*	18, 19, 136, 140		
pprl	posterior profurcal lamella	3, 6, 40, 44, 45	modified after Vilhelmsen 2000b	
ppsu	posterior pronotal sulcus*	35, 56, 96		
prcs	pronotal cervical sulcus*	7, 16, 19, 48, 56, 61, 105		
prfo	propodeal foramen	13, 18, 129, 137, 138		
prfp	profurcal pit	6, 37, 38, 41, 45	Vilhelmsen 2000b	
prp	preocellar pit	1, 20	Bin and Dessart 1983	
prsl	parapsidal line	9, 17, 18, 75, 77, 82, 84	Gibson 1985	
prth	propodeal tooth	18, 129, 137, 138	Duncan 1939	
psc	parascutal carina	9, 17, 18, 72, 74–79	Gibson 1985	
pscy	pleurostomal condydle	1, 26, 28	Ronquist & Nordlander 1989	
psin	prosteranl incision*	5, 6, 37, 38, 41, 45		
pspp	prespiracular propodeal area	18, 19, 133, 135–137, 139?, 140		not prespiracular area *sensu* Ronquist 1995
pss	pronotal suprahumeral sulcus*	7, 16, 19, 36, 48, 49, 56, 105		
pssu	prespecular sulcus*	19, 74, 94, 96, 97, 105		
psu	posterior mesoscutellar sulcus*	9, 17–19, 84, 86, 88, 90		
ptp	posterior tentorial pit	1, 2, 30, 32	Bin & Dessart 1983	
pvpp	posteroventral metapleural pit*	131, 138, 139		= peg like invagination *sensu* Duncan 1939
pxc	preaxillar carina*	9, 17, 18, 76, 78, 79		
saa	supraalar area	18, 19, 130, 131	Ronquist & Nordlander 1989	=semidetached sclerite *sensu* Snodgrass 1942, =metanotal segments *sensu* Duncan 1939, =metanotal ramus *sensu* Alam 1951)
sapi	subalar pit	10, 11, 19, 36, 74, 76, 94, 96, 100, 105	Duncan 1939	
sbc	submedian carina	1, 24	Johnson & Masner 1985	
scbr	scutellar bridge*	87, 89		
sca	metascutellar arm	126, 127	Krogmann & Vilhelmsen 2006	
scu	mesoscutellum	9, 17–19, 75, 83–88, 90	Snodgrass 1942	
shms	mesoscutal suprahumeral sulcus	9, 16, 17, 19, 72, 75, 83, 84	modified after Masner 1991	
sk	skaphion	9, 16, 17, 19, 80, 81	Masner 1972	
skpc	skaphion carina*	9, 16, 17, 80, 81		
sp2	mesothoracic spiracle	8, 19, 48, 52, 60, 61		
msp1	propodeal spiracle	15, 18, 19, 129, 133, 135–137, 139		
spec	speculum	19, 36, 74, 94, 96, 97, 100, 105	Ronquist & Nordlander 1989	=upper mesepimeron sensu Gibson 1986; Krogmann & Vilhelmsen 2006
ssr	scutoscutellar ridge	85, 87, 89, 91, 92	Krogmann & Vilhelmsen 2006	
sss	scutoscutellar sulcus	9, 17–19, 72, 74, 75, 78, 83, 84, 86, 90, 95	Gibson 1985	
str	sternaulus	16, 19, 96, 134	Wharton 2006	=episternal foveae *sensus* Johnson 1984, not sternaulus *sensu* Masner 1976, 1991, Masner and Huggert 1989
tac	transaxillar carina*	9, 17–19, 75, 77–79, 88, 95, 96		
tbr	tentorial bridge	2, 29	Ronquist & Nordlander 1989	
tga	tegula	16, 19, 74, 76, 97	Snodgrass 1942	
tntr	tentorium	1, 27, 29	Duncan 1939	
tps	transpleural sulcus	19, 105	Johnson & Masner 1985	
trt	toruli triangle*	1, 23, 25		
tsa	transscutal articulation	9, 17–19, 72, 74, 75, 78, 83, 84, 86, 90	Gibson 1985	
valm	vertical apodemal lobe of the mesoscutellum*	9, 85, 87, 92, 93, 120		
vbp	ventral bridge of the pronotum	7, 16, 35, 49, 50, 56, 57, 59–61	modified after Gibson 1985	

vcmp	ventral carina of the metapleuron*	13, 14, 18, 99, 134, 142–144		
vgp	ventral edge of propleuron*	5, 6, 35, 37		
vla	ventral lamella*	1, 27, 29		
vmfl	ventral metafurcal lamella*	13, 132, 141, 142		
vmpa	ventral metapleural area*	18, 19, 96, 129, 131, 138		
vpa	ventral propleural area*	3, 5, 6, 36		
vpl	ventral profurcal lamella*	3, 5, 6, 40, 41, 45		
vplc	ventral mesopleural carina*	10, 12, 16, 19, 96, 99, 100, 134		
vpnr	ventral mesopostnotal flange	125	Ronquist & Nordlander 1989	
vprc	ventral propodeal carina*	18, 134, 137, 140		
vpt	vertex patch*	1		
vrcl	vertical ridge of the clypeus*	1, 34		
vrtm	vertical lobe of mesoscutum*	9, 69, 70, 72		
vrx	vertex	2	Huber & Sharkey 1997	
vvl	ventral vertical lobe of the propleuron*	5, 6, 37, 38, 41, 45		

APPENDIX 5. Muscle homologies between Scelionidae and other Hymenoptera (–: absent; ?: questionable or unknown).

abbreviation	term	Figs	function	Duncan 1939	Snodgrass 1942	Others
cr-mdp (l, m)	*posterior cranio-mandibular*	2, 21, 29, 33	mandibular adductors	admd	9	?
cr-mda	*anterior cranio-mandibular*	1, 21, 34, 156, 157	mandibular abductor	abmd	8	?
cr-A1	*craino-antennal*	1, 21, 34	–	–	–	?
not figured	*tentorio-antennal*		depressors and elevators of the antenna	ial, iad, ead, eal	2–5	?
not figured	*tentorio-labial*		tentorial depressor of the labium	plad	18	?
not figured	*tentorio-stipital*		tentorial depressor of the stipes	flst	11, 12, 13	?
cr-phr	*cranio-pharyngeal plate*	1, 34	protractor of the pharyngeal plate	dlph	34, 35	ppp: **h;** 11: **k**
pl1-poc (m, l)	*propleuro-postoccipital*	3, 4, 42, 43, 46	propleural elevator of the head	Ois1	42	1: **j**
pl1-cx1	*propleuro-procoxal*	3, 43	propleural promotor of the fore coxa	l lm2	53	12: **j**
pl1-tr1	*propleuro-protrochanteral*	3, 42, 43	propleural depressor of the protrochanter	llm3	61	17: **j**
t1-cv	*pronoto-laterocervical*	7, 8, 42, 57, 116	pronotal elevator of the propleuron and head	l pm1, 2	47	5: **j**
fu1-cv	*profurco-laterocervical*	4, 5, 39, 44	retractor of the p rosternum	lfp	51	6: **j**
cv-cx1	*laterocervico-procoxal*		diagonal rotator of the fore coxa	llm7	mcr	7: **j**
fu1-pocd	*dorsal profurco-postoccipital*	4, 5, 39, 44, 46	furcal elevator of the head	Ois2	43	2: **j;** profurco-postoccipital muscle: **m**
fu1-pocv	*ventral profurco-postoccipital*	4, 5, 44, 46	furcal depressor of the head	Oi s3,4	44	3: **j;** profurco-postoccipital muscle: **m**
fu1-cx1m	*median profurco-procoxal*	5, 46	median furcal remotor of the fore coxa	l lm4	56	15: **j**
fu1-cx1l	*lateral profurco-procoxal*	5, 37, 46, 57	lateral furcal remotor of the fore coxa	llm5	57	14: **j** profurco-procoxal muscle: **m**
fu1-t1	*pronoto-profurcal*	6, 7, 8, 39, 57, 116	pronotal protractor of the propleuron	lpm5,6	49, 50	10: **j**
ps1-cx1	*prosterno-procoxal*	5	sternal promotor of the fore coxa	Ilm1	54	13: **j**
t1-pl1	*pronoto-propleural*	7, 8, 42, 55, 57, 116	pronotal protractor of the propleuron	lpm3 , 4	48	9: **j**
fu2-fu1d	*dorsal mesofurco-profurcal*	10–12, 46, 116	lateral mesofurcal retractor of the propectus	lis5	–	21: **j**; 124(fu2-fu1): **f**
fu2-fu1v	*ventral mesofurco-profurcal*	10–12, 46, 116, 117	median mesofurcal retractor of the propectus	lis4	52	2 2: **j** ; 1: **d**; 124(fu2-fu1): **f**
t1-ph1	*pronoto-prophragmal*	7, 8, 55, 57, 58, 63, 98, 116	pronotal retractor of the scutum	l is1,2	45	19: **j**
t1-cx1	*pronto-procoxal*	7, 8, 57, 63, 65, 98, 116,	pronotal remotor of the fore coxa	Ilm6	55	11: **j**
t1-poc	*pronoto-postoccipital*	7, 8, 42, 55, 98, 116	pronotal levator of the head	–	40, 41?	4?: **j**, 43, 44: **a**
t1-3ax2	*pronoto-third axillary sclerite of fore wing*	7, 8, 10, 57, 58, 62–65	pronotal flexor of the fore wing	m3Ax?	76a?	7?: **d**; 163, plr2-3ax2: **e**
t1-sp2	*pronoto-mesothoracic spiracle*	7, 8, 55, 58	occlusor of the mesothoracic spiracle	2osp	73	om: **c**; 6: **d**; 110, ism-sp2: **e**
t1-ba2	*pronoto-mesobasalar*	7	pronotal muscle of the basalare	–	–	144, ismba2?: **e**
ph1-ph2	*first phragmo-second phragmal*	46, 70, 81, 98, 122	longitudinal indirect flight muscle, indirect depressor of the fore wing	IIdl1	71	2: **d**; 112(1ph-2ph): **f**; 1ph-2ph: **b**
ph1(t1)-pl1	*first phragmo-propleural*	9, 66	prophragmal protractor of the propleuron	lpm 3, 4	48?	9: **j**
ph1(t1)-poc	*first phragmo-postoccipital*	9, 66	prophragmal levator of the head	–	40, 41	4: **j**?; 43, 44: **a**
pl2-t2c	*third mesopleuro-mesonotal*	9, 12, 66, 70–72	retractor o f the mesoscutum	–	–	5: **d**; 142, t2-plr2: **e**
pl2-t2a	*first mesopleuro-mesonotal*	70, 98	dorsoventral indirect flight muscle, indirect elevator of the fore wing	IIdv1	72	3: **d**; t2-pl2: **b**; 128/129, t2-prep2: **e**
t2-t3	*mesoscutello-metanotal*	9, 81, 87, 89, 92, 120, 125	retractor of the scutellum	IIis1	70	2: **i** ; 114(t2-t3): **f**
pl2-t2b	*second mesopleuro-mesonotal*	9, 10, 12, 62–65, 67, 102, 112, 118, 119	retractor of the scutellar axillar complex	IIpm4	75	4: **d**; 153, t2-epm2: **e**
pl2-3ax2a	*anterior mesopleuro-third axillary sclerite of fore wing*	10, 12, 62, 63, 65, 72, 103, 104	second pleural flexor of the fore wing	IIpm2	76b	8: **d**; 163, plr2-3ax2: **e**
pl2-3ax2p	*posterior mesopleuro-third*	10, 12, 62–65, 67, 72, 103, 104, 112, 118	third pleural flexor of the fore wing	IIpm3	76c	9: **d**; 164, epm2-3ax2: **e**
ism1,2-ba2	*intersegmental membrane-mesobasalar*	10, 12, 64, 67, 103, 118	intersegmental muscle of the basalare	–	–	144: **e**
pl2-ba2	*mesopleuro-mesobasalar*	10, 12, 67, 103, 104, 118	mesopleural muscle of the basalare	IIpm1	77	10: **d**; pl2-ba2b: **b**; 154, prep2-ba2: **e**
pl2-3ax3	*mesopleuro-third axi*	11, 104, 109, 110, 113–116	mesopleural flexor of the hind wing	I IIpm2a?	100	19: **d**
pl2-fu2	*mesopleuro-mesofurcal*	10, 12, 108, 111, 112, 114	mesothoracic furco-pleural muscle	IIfpl1	79	12: **d**; 151(pl2-fu2a): **f**

pl2-cx2	*mesopleuro-mesocoxal*	10, 12, 62–65, 67, 102–104, 112, 118	lateral promotor of the mesocoxa	IIlm1	80	13: **d**; 157, prep2-cx2: **e**
cx2-sa2	*mesocoxo-mesosubalar*	11, 64, 67, 109–111, 113	lateral remotor of the mesocoxa	–	82	160, cx2-sa2: **e**; cx2-sa2: **b**
s2-cx1	*mesosterno-procoxal*	10	mesosternal retractor of the propectus	l is3	58	16: **j**
fu2-tr2m	*median mesofurco-mesotrochanteral*	10, 11, 111	median furcal depressor of the mesotrochanter	IIlm3a	–	fu2-tr2: **c; l**; 174(fu2-tr2): **f**
fu2-tr2l	*lateral mesofurco-mesotrochanteral*	10–12, 67, 109, 111, 114, 115, 118, 119	lateral furcal depressor of the mesotrochanter	IIlm3b	–	pl2-tr2: **c**; **l**
fu2-cx2	*mesofurco-mesocoxal*	10, 11, 46, 109, 110, 113	furcal remotor of the mesocoxa	IIlm4	83	15: **d**; 173(fu2-cx2p): **f**
s2-cx2	*mesosterno-mesocoxal*	10, 46, 104	sternal promotor of the mesocoxa	IIlm2	81	14: **d**; 169(fu2-cx2a): **f**
fu2-ph2	*mesofurco-mesolaterophragmal*	10–12, 109–111, 115, 121	furcal retractor of the second phragma	IIdv2	78	11: **d**; 150a,b(fu2-pn2a,p): **f**
fu3-fu2	*metafurco-mesofurcal*	10, 15	interfurcal muscle	IIis2	–	27: **i**; 181(fu3-fu2): **f**; fu3-fu2: **h**
pl3-t3 (a, b)	*metapleuro-metanotal*	14, 15, 132, 144, 151, 152	pleural depressor of the metanotum	IIpm4	97–99	10: **i**; pl3-t3: **h**
t3-tr3	*metanoto-metatrochanteral*	13, 15, 67, 143, 145, 146, 151	metanotal depressor of the metatrochanter	–	–	t3-tr3: **b**; 20: **i**
pl3-ba3	*metapleuro-metabasalar*	14, 15, 67	metapleural muscle of the metabasalare	IIpm1	101	13: **i**; pl3-ba3: **h**; pl3-ba3: **b**
pl3-3ax3	*metapleuro-third axillary sclerite of hind wing*	14, 104, 143, 144, 151, 152	second flexor of the hind wing	IIpm2b	100	12b: **i**; pl3-3ax3: **h**
pl3-sa3	*metapleuro-metasubalar*	14, 147, 149, 150	metapleural muscle of the metasubalare	IIpm3a&b	102	15: **i**; pl3-sa3: **h**; pl3-sa3a,b: **b**
cx3-sa3	*metacoxo-metasubalar*	14, 150, 152	subalar remotor of the hind coxa	IIp m5	105	22: **i**; cx3-sa3: **b**
pl3-cx3m	*median metapleuro-metacoxal*	14, 15, 145–147, 149	sternal promotor of the hind coxa	IIIl m1	104	25: **i**
pl3-cx3l	*lateral metapleuro-metacoxal*	13–15, 67, 149, 152	pleural promotor of the hind coxa	IIIlm4	103	26: **i**; pl3-cx3: **h**
pl3-tr3	*metapleuro-metatrochanteral*	13	pleural depressor of the metatrochanter	IIIl m3	109	31?: **i**
fu3-tr3	*metafurco-metatrochanteral*	13, 15, 67, 148, 149	furcal depressor of the metatrochanter	IIIl m3	109?	31: **i**
fu3-cx3	*metafurco-metacoxal*	13, 15, 67, 148, 151	remotor of the hind coxa	IIIlm2	106	30: **i**
fu3-S2 (m, l)	*metafurco-second abdominal sternal*	13–15, 104, 145–147, 151, 153 – 155	depressor of the metasoma	IIIis1, 2	118	35: **i**
ph3-ph2	*second phragmo-third phragmal*	13	indirect flight muscle of the metathorax	IIIdl	96	5: **i**; 112m(2ph-3ph): **f**; 2ph-3ph: **b**; 18: **d**
ph3-T2	*third phragmo-second abdominal tergal*	13, 14, 67, 143, 145–147, 149, 151–155	propodeal elevator of the metasoma	Iadl1	120	32: **i**
T1-T2	*propodeo-second abdominal tergal*	13, 14, 104, 145, 152–155	tergal torsion muscle of the metasoma	Iadl2	119	32a:**i**
T1-S2	*propodeo-second abdominal sternal*	13, 152–155	sternal torsion muscle of the metasoma	IIIis3	121	35: **i**
T1-T1sp	*propodeo-first metasomal spiracle*	13, 14	dilator muscle of the first metasomal spiracle	dspI	123	?

a compiled from Alam 1951

b compiled from Daly 1963

c compiled from Gibson 1985

d compiled from Gibson 1986

e compiled from Gibson 1993

f compiled from Heraty et al. 1994

g compiled from Johnson 1988

h compiled from Ronquist & Nordlander 1989

i compiled from Vilhelmsen 2000a

j compiled from Vilhelmsen 2000b

k compiled from Vilhelmsen 1996

l compiled from Gibson 1999

m Krogmann & Vilhelmsen 2006

APPENDIX 6. Descriptions of *Xenomerus* species

Xenomerus armatus, new species

Figures 196, 197, 199, 202

FEMALE (HT): Length=1.04 mm. Black, interantennal process, mandible, radicle, A1-A7, tegula and legs excluding brown coxae yellow, A8-A12 brown; **FCI**=1.18; **LCI**=2.05; **HW/IOS**=1.57; IOS shortest about eye midlevel; head less than 1.5 times as wide as mesosoma (**HW/TSL**= 1.38); facial striae reaching vertex along inner orbit; frontal patch indistinct, obscured by facial striae; frons setae dense, thin; central keel complete; toruli triangle shorter than clypeus height; POL 1.2 times as long as OOL (**POL/OOL**=1.2); OOL 1.5 times as long as LOL (**OOL/LOL**=1.53); hyperoccipital carina present, blunt, extending to inner orbit; vertex smooth; vertex and genal patch absent; A1 more than 3 times as long as radicle (**A1/r**=3.2), as long as clava (**A1/cl**=0.96); A3 distinctly longer A4; epomial carina well developed, almost reaching pronotal suprahumeral sulcus; cervical pronotal area smooth, with scattered setae, setal base pustulate; lateral pronotal area with transverse crenulae; netrion sulcus absent; netrional striation slightly extending onto lateral pronotal area; pronotal suprahumeral and cervical sulci complete, foveolate; mesoscutum about 1.5 times as wide as long (**TSL/ML**=1.45); notaulus reaching transscutal line; mesoscutum with dense, thin setae, setal base pustulate, reticulate sculpture extending to lateral and inter notaular areas; mesoscutellum about two times as wide as long (**SW/SL**=1.91); scuto-scutellar sulcus slightly diminishing medially, less than 1.5 times as wide laterally as in the middle; mesoscutellum smooth, with a median spine and dense, long, thin, marginal setae; a keel extending from the middle of anterior margin of mesoscutellum to apex of median spine; posterior scutellar sulcus extending onto axillula; sternaulus not separated from anterior row of foveae of mesopleural carina; distance between postacetabular sulcus and anterior row of foveae of mesopleural carina nearly as wide as foveae width of postacetabular sulcus; mesopleural carina complete with complete rows of foveae; foveae of mesepimeral sulcus 4 times as wide as posterior row of fovea of mesopleural carina, distance between posterior row of foveae and mesopleural sulcus less than foveae width of mesepimeral sulcus; metascutellum sharply pointed; sulcus along metapleural carina foveolate; epicoxal and lower part of metapleural sulci not merged; propodeal lateral carinae inverted Y-shaped; propodeal lateral and plical areas obscured by thick, dense setae, marginal striation extending medially; plica absent; posterior propodeal projection well developed; mesoscutum as wide as forewing (**TSL/WW**=1.08); marginal vein about 2.5 times as long as stigmal vein (**m/st**=2.7); hind wing less than 2.5 times as wide as marginal ciliae length (**HWW/HWS**=2.36); T1 two times as wide as T1+T2 length (**T1W/T1+T2L**=2.0); T3 about as wide as mesoscutum (**T3W/TSL**=0.93); costae on T3 graduating posteriorly into longitudinally rugoso-punctate sculpture, reaching almost the posterior margin of tergum; lateral patches distinct, circular in shape; posterior patch of T3 indistinct, obscured by longitudinally rugoso-punctate sculpture; anterior half of T4 entirely reticulate

MALE: unknown

DIAGNOSIS: see Most similar to *X. spinosus*, differs by longer IOS located in eye midlevel, smaller eyes, shorter head, clava and radicle, POL/OOL, hyperoccipital carina extending to inner orbit, vertex sculpture not extending to frons, presence of median keel extending from anterior margin of mesoscutellum to median spine, absence of netrion sulcus, A4 as long as A3, shorter marginal vein and less elongated metasoma.

ETYMOLOGY: the name is refers the unique armature of mesoscutellum

MATERIAL EXAMINED: Holotype female: **THAILAND:** 400m Uthai Thani Dist. Khao Nang Rum May.1986, MT, M.G.Allen. Paratype: Soi Dao, Forest Insect Centre, 13˚0'9"N102˚17'7"E, 197m, 16.i.2005, M.Sharkey, 1female. Holotype and paratype are deposited in CNCI.

Xenomerus aureipes, new species

Figures 175, 251, 252, 273, 275

FEMALE (HT)**:** Length=1.2 mm. Dark brown, antenna, excluding brown A8-A12, distal part of A7, interantennal process, mandible and legs, including coxae, excluding last brown tarsomeres, tegula pale yellow; **FCI**=1.13; **LCI**=1.71; **HW/IOS**=1.64; head less than 1,5 times as wide as mesosoma (**HW/TSL**= 1.36); facial striae exceeding eye midlevel along inner orbit, reaching frontal patch; frontal patch distinct, oblique, transverse; frons setae rare, thin; central keel complete (Fig. 59); toruli triangle shorter than clypeus height; POL less than two times as long as OOL (**POL/OOL**=1.64); OOL longer than LOL (**OOL/LOL**=1.33); hyperoccipital carina present, blunt; vertex smooth, except reticulate, transversely elongated vertex patch; vertex setae denser behind POL area, setal base pustulate; genal patch absent; A1 less than 3.0 times as long as radicle (**A1/r**=2.9), as long as clava (**A1/cl**=1); epomial carina present, diminishing medially; cervical pronotal area smooth, with scattered setae; lateral pronotal area dorso-medially reticulate, ventrolaterally smooth; netrion sulcus complete; netrional striation not extending onto lateral pronotal area; pronotal suprahumeral sulcus diminishing medially, pronotal cervical sulcus complete, both sulci foveolate; mesoscutum more than 1.5 times as wide as long (**TSL/ML**=1.66); notaulus reaching transscutal line; scaly reticulate sculpture of mesoscutum not extended to lateral and inter notaular area; mesoscutellum nearly 2 times as wide as long (**SW/SL**=1.92); scuto-scutellar sulcus slightly diminishing medially, 1.5 times as wide laterally as in the middle; mesoscutellum with rare marginal setae; posterior scutellar sulcus extending onto axillula; sternaulus not separated from anterior row of foveae of mesopleural carina, distance between postacetabular sulcus and anterior row of foveae of mesopleural carina 2-3 times as wide as foveae width of postacetabular sulcus; mesopleural carina complete with complete rows of foveae; maximal distance between posterior row of foveae of mesopleural carina and mesepimeral sulcus two times as long as posterior row of foveae of mesopleural carina; sulcus along metapleural carina foveolate; metascutellum sharply pointed; propodeal lateral carinae inverted Y-shaped; propodeal lateral and plical areas obscured by pale, dense setae, marginal striation extending medially; posterior propodeal

projection distinct, tubercle like; fore wing wider than mesoscutum (**TSL/WW**=0.88); marginal vein 3 times as long as stigmal vein (**m/st**=3); hind wing about 2.5 times as wide as marginal ciliae length (**HWW/HWS**=2.66); T1 less than 2 times as wide as T1+T2 length (**T1W/T1+T2L**=1.72); T3 about as wide as mesoscutum (**T3W/TSL**=1.14), costae on T3 almost reaching apex of tergum, reaching 8/9 of tergum; lateral patch of T3 distinct; diameter of posterior patch of T3 equal to width of one basal groov; anterior half of T4 entirely reticulate; acrosternal calyx of S5 are fused and circular in shape, S8 with 4 apical setae.

VARIABILITY (n=5): Length=1.14-1.45 mm (m=1.33, SD=0.11); in two specimens from Kenya coxae, A1-A4 brown; **FCI**=1.11-1.14 (m=1.13, SD=0.01); **LCI**=1.66-1.8 (m=1.75, SD=0.059); **HW/IOS**=1.58-1.64 (m=1.6, SD=0.052); **HW/TSL**=1.31-1.36 (m=1.34, SD=0.02); **POL/OOL**=1.75-1.86 (m=1.8, SD=0.05); **OOL/LOL**=1.14-1.33 (m=1.2, SD=0.07); **A1/r**=2.76-2.88 (m=2.81, SD=0.05); **A1/cl**=0.89-1(m=0.93, SD=0.04); **TSL/ML**=1.55-1.66 (m=1.59, SD=0.046); **SW/SL**==1.92-2 (m=1.97, SD=0.03); **TSL/WW**=0.84-0.88 (m=0.86, SD=0.01); **m/st**=2.90-3.07 (m=3.01, SD=0.06); **HWW/HWS**=2.44-2.66 (m=2.53, SD=0.08); **T1W/T1+T2L**=1.7-1.86 (m=1.80, SD=0.067); **T3W/TSL**=1.03-1.2 (m=1.12, SD=0.06); in two specimens from Kenya costae shortened laterally and medially on T3; diameter of posterior patch of T3 sometimes reduced, equal or smaller than one basal groove;

MALE (n=4): length=1.12, 1.44, 1.48; radicle, A1 and A2 yellow, coxa A3-A12 bright brown; (**FCI**=1.21); **HW/IOS**=1.41, 1.47, 1.53; **HW/TSL**=1.32, 1.28, 1.33; OOL longer (**POL/OOL**=1.47, 1.4, 1.5; **OOL/LOL**=1.54, 1.53, 1.57); **A1/r**=2.85, 2.8, 3; A2-A6 unibottled, A5 modified; A7-A11 double bottled, with distinct constrictions; antennomeres with numerous ventral microcilia**; A8** 7**,** 7.5 times as long as wide; **TSL/ML**=1.48, 1.42, 1.47; posterior row of foveae of mesopleural carina reduced, maximal distance between posterior row of foveae of mesopleural carina and mesepimeral sulcus 4-5 times as long as posterior row of foveae of mesopleural carina; **m/st**=2.9, 3.1, 3.1; **HWW/HWS**=2.3, 2.68, 2.73; metasoma elongate (**T1W/T1+T2L**=1.5, 1,54, 1.55); **T3W/TSL**=0.96, 0.96, 0.97; T3 costae reduced, shortened laterally and medially;

DIAGNOSIS: Most similar to *X. comatus*, distinguished by the rare, thin setae of body, smooth frons, presence of frontal patch, presence of netrion sulcus, absence of rugulous sculpture on T3.

ETYMOLOGY: From the latin aureus, meaning golden and the latin pes, meaning leg, referring to pale yellow color of legs.

MATERIAL EXAMINED:

Holotype female: **REPUBLIC OF SOUTH AFRICA:** Holotype female: Kwazulu-Natal, Pietermaritzburg Hilton, 4-23.x.2004, M.Mostovski. Paratypes: Trans. Malta Forest, 1000m, 20km W. Trichardtsdal, 23.XII.1985. s.s. M.Sanborne**,** 1 female; Port Elizabeth, Settler's Park, Dec.1979. pan. trap, A.Watsham, 1female; Cape Prov. N. P. Tsitsikama, 23.X.1994-1.I.1995. John Allen, MT, 1female; Natal, 75km, WSW, Eastcourt Cathedral Peaks for Stn. 8-20.XII.1979. S.&J.Peck, 1400m, 1male; Kwazulu-Natal, Ramsgate Butterfly, Sanctuary, 30˚53.3'S 30˚20.4'E, 9.i-2.ii.2005,

M.Mostovski, MT., 2male; Kwazulu-Natal, Pietermaritzburg Hilton, 28.x-12xi.2003., M.Mostovski, MT., 1female; 27.i-16.ii.2004, 1female;4-23.x.2004, 1female; 11-23.2003, 1female; 24.xi-9.xii.2003, 2female; 17-29.ii.2004, 1male; Kwazulu-Natal, Eshowe, garden, YPT, 21-23.iii.2005, V.Kolyada, 1male. **CENTRAL AFRICAN REPUBLIC**: Prefecture Sangha-Mbaéré, Parc National de Dzanga, Nddoki, Mabéa Bai, 21.4km, 53˚NE Bayanga, 3˚02.01'N 16˚24.57'E, 510m, 6.v.2001, S.van Noort, Sweep, CAR01'S50, Lowland Rainforest, marsh clearing, 1female; 5.v.2001, 1female. **MALAWI**: Chitipa Distr. Jembya Reserv. 18km SSE Chisenga, 10°08'S, 33°27'E, 1870m, 11-20.XII.1988. J.Rawlins, S.Thompson, 1male. **RHODESIA (ZIMBABWE)**: Salisbury, I-III. 1975, A. Watsham, 1male. **UGANDA**: Kampala, lakeshore 3800 ft. Jan. 1973. H.Falke 1male. Other material: **KENYA**: Nairobi, March.1982. pan.trap, .C.Lubega 1female; Kajiado District, Ewaso Ngiro River, ICIPE field station at rd. to Nguruman Escarpment, 600m, 1.848°S, 36.100°E, 22-30.IV.1999, S.Miller, 2female; Eastern Krimiri Hill, 1745m, 0˚25.45'S 37˚32.71'E, 2-16.iii.2005, wet forest near Mt.Kenya, 1female. Holotype is deposited in SANC; 12 paratypes in CNCI, 5 in NMSA, 2 in SAMC.

COMMENTS: Two females from Kenya have unique coloration and sculpture on T3. Whether these variabilities are inter or intraspecific requires examination of more specimens.

Xenomerus bickeli *new species*

Figures 244, 245

FEMALE (HT)**:** Length=1.51 mm. Dark brown, interantennal process, radicle, A3-A6, legs excluding last dark brown tarsomeres yellowish; **FCI**=1.25; **LCI**=1.65; **HW/IOS**=1.58; head less than 1.5 times as wide as mesosoma (**HW/TSL**=1.41); facial striae reaching midlevel of eye, parallel on frons, obscuring frontal patch; frontal patch indistinct; frons setae rare, thin; central keel complete; toruli triangle shorter than clypeus height; POL slightly longer than OOL (**POL/OOL**=1.15); OOL slightly longer than LOL (**OOL/LOL**=1.66); hyperoccipital carina absent; vertex entirely reticulate, finely crenulate between lateral ocellus and inner orbit; genal patch present, separated from vertex sculpture; A1 less than 5.0 times as long as radicle (**A1/r**=4.58), about as long as clava (**A1/cl**=0.96); epomial carina present, reaching pronotal suprahumeral sulcus; cervical pronotal area smooth, with rare setae; lateral pronotal area with fine, transverse crenulae, anteriorly finely foveolate; netrion sulcus complete, fore coxa distinctly wider than netrion; pronotal suprahumeral and cervical sulci complete, foveolate; mesoscutum less than 1.5 times as wide as long (**TSL/ML**=1.35); notaulus normal, almost reaching transscutal line; reticulate sculpture of mesoscutum not extending to inter and lateral notaular areas; mesoscutellum less than 2.0 times as wide as long (**SW/SL**=1.80); scuto-scutellar sulcus slightly diminishing medially, 2-3 times as wide laterally as in the middle; mesoscutellum smooth, with rare, long marginal setae; posterior scutellar sulcus not extending onto axillula; sternaulus not separated from anterior row of foveae of mesopleural carina; distance between postacetabular sulcus and anterior row of foveae of mesopleural carina two times as long as foveae width of postacetabular sulcus; mesopleural carina complete, with complete rows of foveae; in lower part of mesepimeral

sulcus fine crenulae erecting from foveae anteriorly; sulcus along metapleural carina foveolate; metascutellum sharply pointed, metanotal spine not elongated; propodeal lateral carinae inverted Y-shaped, shafts distinctly curved outward; propodeal lateral area and plical area obscured by pale, dense setae, marginal striation extending medially; posterior propodeal projection indistinct; forewing wider than mesoscutum (**TSL/WW**=0.73); marginal vein more than 3.5 times as long as stigmal vein (**m/st**=3.88); hind wing two times as wide as marginal ciliae length (**HWW/HWS**=2.0); T1 as wide as T1+T2 length (**T1W/T1+T2L**=1.02); T3 less than 1.5 times as wide as long (T3W/T3L=1.22), as wide as mesoscutum (**T3W/TSL**=1.04); costae on T3 reaching middle tergum submedially; lateral patch distinct, elongate, 4-5 time as long as wide; posterior patch of T3 absent; anterior half of T4 reticulate with median smooth area.

MALE : unknown

DIAGNOSIS: Most closely related to *X. gloriosus*, differs by A4 equal to A3, frontal patch obscured by facial striae, shorter POL, less wide netrion, well developed metanotal spine and presence of posterior patch on T3. Differs from *X. varipes* and *X. laticeps* in head widest below midlevel.

ETYMOLOGY: the name is refers to the collector, D. Bickel.

MATERIAL EXAMINED**:** Holotype female: **AUSTRALIA:** Vic. Otway N. P. 5m, 4-5.XII.1994, Blanket Bay, D.Bickel, YPT. Holotype is deposited in SAMA.

Xenomerus buccatus (Kononova & Kozlov), new combination

Figure 187

Trimorus buccatus Kononova & Kozlov, 2001: 233. Original description.

FEMALE (HT)**:** Length=0.84 mm. Light brown; radicle, head and last tarsomeres dark brown; **FCI**=1.28; **LCI**=1.46; **HW/IOS**=1.64; head less than 1.5 times as wide as mesosoma (**HW/TSL**= 1.34); facial striae not reaching midlevel of eye, exceeding frontal patch; frontal patch distinct, frons setae rare, thin; central keel incomplete; POL less than 1.5 times as long as OOL (**POL/OOL**=1.2); OOL more than 1.5 times as long as LOL (**OOL/LOL**=1.66); hyperoccipital carina absent, vertex entirely reticulate, vertex sculpture extending to interocellar area, merging with genal patch; A1 about 3.0 times as long as radicle (**A1/r**=3.11), shorter than clava (**A1/cl**=0.82); epomial carina absent, cervical pronotal area smooth, with rare setae; lateral pronotal area smooth with few crenulae above pronotal ventral projection; netrion sulcus complete; netrional striation not extending onto lateral pronotal area; pronotal suprahumeral and cervical sulci not foveolate; mesoscutum about 2.0 times as wide as long (**TSL/ML**=1.95); notaulus short, slightly exceeding transscutal line, distance between posterior end of notauli more than two times as long as distance between posterior end of notaulus and posterolateral edge of mesoscutum; inter notaular area entirely sculptured, lateral notaular area smooth; mesoscutellum about 2.5 times as wide as long (**SW/SL**=2.58); scuto-scutellar sulcus almost as wide medially as laterally; mesoscutellum smooth, with rare marginal setae; posterior scutellar sulcus not extending onto axillula; sternaulus not separated from anterior row of foveae of mesopleural

carina; mesopleural carina incomplete; sulcus along metapleural carina foveolate; metascutellum bluntly triangular, only base striated, with a triangular, semitransparent lamella apically; propodeal lateral carinae inverted V-shaped; propodeal lateral area and plical area with rare setae, marginal striation not extending medially; posterior propodeal projection indistinct; wings reduced, forewing as long as mesosoma; T1 more than 1.5 times as wide as T1+T2 length (**T1W/T1+T2L**=1.66); T3 more than 1.5 times as wide as long (**T3W/T3L**=1.77), about 1.2 times as wide as mesoscutum (**T3W/TSL**=1.27); costae on T3 not reaching 1/5 of tergum; lateral patch of T3 absent; posterior patch of T3 reduced nearly equal to width of 2-3 basal grooves; lateral patch on T4 present, reduced; median patch on T4 absent.

MALE: unknown

DIAGNOSIS: Most closely related to *X. calligetus*, differs in smooth frons, and lateral notaular area, wider mesosoma, reduced wings and less elongate metasoma.

MATERIAL EXAMINED: Holotype female: **RUSSIA:** Kunashyr, Peschanoje Lake, 18.8.1980. Kononova, Holotypus, Trimorus buccatus, K.K.

Notes: probably the short winged form of *X. calligetus.*

Xenomerus calligetus (Kononova & Kozlov), new combination

Figures 188, 189

Trimorus calligetus Kononova & Kozlov, 2001: 231. Original description.

FEMALE (HT)**:** Length=0.95 mm. Brown; palpus maxillaris, mandible, interantennal process, radicle, A1 proximally, A2, legs, including coxae, excluding last brown tarsomeres yellow; **FCI**=1.25; **LCI**=1.45; **HW/IOS**=1.57; head less than 1.5 times as wide as mesosoma (**HW/TSL**= 1.33); facial striae exceeding midlevel of eye, exceeding frontal patch; frontal patch distinct; frons setae rare, thin; central keel complete, indistinct dorsally, obscured by frons sculpture; POL less than 1.5 times as long as OOL (**POL/OOL**=1.2); OOL more than 1.5 times as long as LOL (**OOL/LOL**=1.66); hyperoccipital carina absent; vertex entirely reticulate, vertex sculpture extending anteriorly to frons, merging posteriorly with genal patch; A1 less than 5.0 times as long as radicle (**A1/r**=4.25), shorter than clava (**A1/cl**=0.83); epomial carina absent, cervical pronotal area smooth, with rare setae, setal base pustulate; lateral pronotal area reticulate dorsally, with few crenulae above pronotal ventral projection; netrion sulcus complete; netrional striation not extending onto lateral pronotal area; pronotal suprahumeral and cervical sulci not foveolate; mesoscutum about 1.5 times as wide as long (**TSL/ML**=1.55); notaulus short, not exceeding transscutal line, distance between posterior end of notauli more than two times as long as distance between posterior end of notaulus and posterolateral edge of mesoscutum; mesoscutum entirely sculptured; mesoscutellum about 2.0 times as wide as long (**SW/SL**=1.94); scuto-scutellar sulcus almost as wide medially as laterally; mesoscutellum smooth, with rare, long marginal setae, setal base pustulate; posterior scutellar sulcus not extending onto axillula; sternaulus not separated from anterior row of foveae of mesopleural carina; sulcus along

metapleural carina foveolate; metascutellum triangular, only base striated, with a triangular, semitransparent lamella apically; propodeal lateral carinae inverted V-shaped, shafts straight; propodeal lateral area and plical area with dense setae, marginal striation not extending medially; posterior propodeal projection indistinct; forewing as wide as mesoscutum (**TSL/WW**=1.04); marginal vein more than 5 times as long as stigmal vein (**m/st**=5.62); hind wing about two times as wide as marginal ciliae length (**HWW/HWS**=1.9); T1 less than 1.5 times as wide as T1+T2 length (**T1W/T1+T2L**=1.48); T3 about 1.5 times as wide as long (**T3W/T3L**=1.57), about 1.2 times as wide as mesoscutum (**T3W/TSL**=1.22); costae on T3 exceeding 1/3 of tergum; lateral patch present; posterior patch of T3 reduced, nearly equal to width of 2-3 basal grooves; lateral and median patches on T4 present, separated.

VARIABILITY (n=5): Length=0.78-0.95 mm (m=0.85, SD=0.08; **FCI**=1.21-1.25 (m=1.22, SD=0.02); **LCI**=1.45-1.54 (m=1.49, SD=0.04); **HW/IOS**=1.57-1.66 (m=1.63, SD=0.04); **HW/TSL**=1.33-1.36 (m=1.34, SD=0.01); **POL/OOL**=1.2-1.21 (m=1.20, SD=0.006); **OOL/LOL**=1.63-1.66 (m=1.65, SD=0.01); **A1/r**=4.16-4.28 (m=4.23, SD=0.06); **A1/cl**=0.83-0.85 (m=0.84, SD=0.01); **TSL/ML**=1.55-1.58 (m=1.56, SD=0.01); **SW/SL**==1.94-2.09 (m=2.03, SD=0.08); **TSL/WW**=1.04-1.13 (m=1.04, SD=0.05); **m/st**=5.33-5.62 (m=5.48, SD=0.14); **HWW/HWS**=1.77-2.0 (m=1.89, SD=0.11); **T1W/T1+T2L**=1.36-1.48 (m=1.41, SD=0.05); **T3W/T3L=**1.48-1.68 (m=1.57, SD=0.09); T3w/TSL=1.10-1.20 (m=1.17, SD=0.06)

MALE: unknown

DIAGNOSIS: Most closely related to *X. buccatus*, differs in more elongated metasoma, entirely sculptured frons, well developed fore and hind wings, less transverse mesoscutellum. Differs from *X. cornutus*, in entirely sculptured frons, and mesoscutum, less elongate metasoma and wider fore wing.

MATERIAL EXAMINED: Holotype female: **UKRAINE:** Khersonska region, Solenoozernyj District, 22.07.1974, leg. S. Kononova; red label Holotypus Trimorus calligetus K.K. Other material examinrd: **NETHERLAND**: Lienden, VIII.1977, leg. Vlug, Malaise trap 3female. **HUNGARY**: Újszentmargita, védett erdő, Peucedano Asteretum Alupecuretosum, 1975.V.5-6. leg: Szelényi.

Xenomerus canariensis Huggert

Figures 191, 193

X. canariensis Huggert, 1979: 68. Original description. Bin, 1983: 185. Description of male; Graham, 1984: 92. Diagnosis of male.

Trimorus mutator Kononova & Kozlov, 235. **NEW SYNONYMY**, (original description, keyed).

FEMALE (n=16)**:** Length=0.58-0.80 mm (m=0.68, SD=0.06). Dark brown to light brown; radicle, A1 proximally, A2 distally, legs including coxae and metasoma usually lighter than head and mesosoma; **FCI**=1.27-1.30 (m=1.29, SD=0.01); **LCI**=1.54-1.56 (m=1.54, SD=0.01); **HW/IOS**=1.56-1.60 (m=1.57, SD=0.01); head less than 1.5 times as wide as mesosoma (**HW/TSL**= 1.27-1.47, m=1.34, SD=0.05); facial striae not reaching midlevel of eye, exceeding and frontal patch; frontal patch

distinct; frons setae rare, thin; central keel incomplete, sometimes reaching eye midlevel; POL less than 1.5 times as long as OOL (**POL/OOL**=1.33-1.44, m=1.40, SD=0.05); OOL longer LOL (**OOL/LOL**=1.28-1.31, (m=0.95, SD=0.08); hyperoccipital carina absent, vertex entirely reticulate, vertex sculpture extending to interocellar area, not extending anteriorly to frons, not merging with genal patch; A1 less than 5.0 times as long as radicle (**A1/r**=3-3.37, m=3.19, SD=0.14), almost equal clava (**A1/cl**=0.82-0.93, m=0.87, SD=0.03); epomial carina absent, cervical pronotal area smooth, with rare setae; lateral pronotal area smooth with few crenulae above pronotal ventral projection; netrion sulcus complete; netrional striation not extending onto lateral pronotal area; pronotal suprahumeral and cervical sulci not foveolate; mesoscutum about 1.5 times as wide as long (**TSL/ML**=1.59-1.64, m=1.62, SD=0.03); notaulus elongate, almost reaching anterior margin of mesoscutum, distance between posterior end of notauli nearly equal to the distance between posterior end of notaulus and posterolateral edge of mesoscutum; reticulate sculpture of mesoscutum not extending to lateral notaular area, inter notaular area smooth basally; mesoscutellum about than 2.0 times as wide as long (**SW/SL**=2.00-2.27, m=2.14, SD=0.11); scuto-scutellar sulcus strongly reduced medially, 5-6 times as wide laterally as in the middle; mesoscutellum smooth, with rare, long marginal setae; posterior scutellar sulcus not extending onto axillula; sternaulus not separated from anterior row of foveae of mesopleural carina; mesopleural carina incomplete; sulcus along metapleural carina foveolate; metascutellum entirely striated, triangular, without triangular, semitransparent lamella apically; propodeal lateral carinae inverted V-shaped, shafts straight; propodeal lateral and plical areas with few, marginal setae; marginal striation usually not extending medially, in some African specimens both areas entirely striated; posterior propodeal projection indistinct; mesoscutum distinctly wider than fore wing (**TSL/WW**=1.21-1.42, m=1.27, SD=0.05); marginal vein less than 4 times as long as stigmal vein (**m/st**=3.27-3.5, m=3.30, SD=0.07); hind wing slightly wider than marginal ciliae length (**HWW/HWS**=1.15-1.2 m=1.18, SD=0.02); T1 two times as wide as T1+T2 length (**T1W/T1+T2L**=1.93-2.01, m=1.99, SD=0.05); T3 more than 1.5 times as wide as long (T3W/T3L=1.6-1.91, m=1.76, SD=0.10), about 1.2 times as wide as mesoscutum (**T3W/TSL**=1.17-1.32, m=1.26, SD=0.05); costae on T3 not reaching 1/5 tergum; lateral patch of T3 absent; posterior patch of T3 reduced, nearly equal to width of 2-3 basal grooves; lateral and median patches on T4 present, not fused.

MALE (n=21): length=0.61-0.79 (m=0.69, SD=0.06); **FCI**=1.26-1.36, m=1.32, SD=0.02); **LCI**=1.34-1.51, m=1.45, SD=0.06); **HW/IOS**=1.5-1.65 (m=1.58, SD=0.05); **HW/TSL**=1.28-1.37 (m=1.32, SD=0.02); facial striae exceeding eye midlevel; **POL/OOL**=1.2-1.4, m=1.26, SD=0.09); **OOL/LOL**=1.42-1.66 (m=1.64, SD=0.06); **A1/r**=2.33-2.75 (m=2.51, SD=0.11); **TSL/ML**=1.56-1.66 **(**m=1.60, SD=0.04); **SW/SL**=1.92-2.27 **(**m=2.07, SD=0.15); **TSL/WW**=1.16-1.35 (m=1.21, SD=0.05); **m/st**=4.0-4.60 (m=4.33, SD=0.05); **HWW/HWS**=1.0-1.07 (m=1.03, SD=0.03); **T1W/T1+T2L**=1.50-1.76, (m=1.64, SD=0.06); **T3W/TSL**=1.0-1.20(m=1.12, SD=0.06).

DIAGNOSIS: Most closely related to *X. ergenna,* differs by POL/OOL, extension of vertex sculpture to interocellar area, absence of sharp hyperoccipital carina; stronger diverging notauli; narrower hind and fore wings, length and angle of stigmal vein, longer marginal ciliae on hind wing.

MATERIAL EXAMINED: HUNGARY: Nógrád county, Balassagyarmat, 2000.VII.24-31. leg: Veszelka Mária, 1female, 1male; VI.19-26., 1female; 14-27.2002, 1female, 1male; Rév, 25.VII.904, Bíró, 1female; Veszprém county, Csopak, Vitis vinifera, MT.27.V.2002. leg. Gy-né, Molnár J., 1female. **ITALY:** Sardegna, Tempio Pausania, 18-28.IX.1978, MT. leg: Luciano, 2female; 10-17.VIII.1978., 1male; Piacenza, Velleia, Lago, malaise trap, 18-21.VIII.1973, lee. F.Bin, 1female; Genova, M. Fasce, 900-1000m, incolt, 02.X.1972. F.Bin, 4female; Perugia, Passignano, 06.IX.1976. F.Bin, 1female; 06.IX.76., 1female; Umbria, Terni, M. Peglia, 23.VI-04.VII.1978. MT. F.Bin, 1male; 8-15.IX.1978., 1male; 1-9.XI.1978., 3male. **YUGOSLAVIA (CROATIA):** Istria, Rabac, 21-26.iv.1975, J.S.&M.E.Noyes, B.M.1975-208. **FRANCE:** Hérault Balliarguet CSIRO, 43 41’12”N, 3 62’24”E, 18.IV-3.V. 1993, P.Mason, MT; Montpellier, 05-15.VI.1980., J.T.Huber, Pan tr., 1male; B.du Rhone, Fonscolombe, (6) 11.vii.1990, M.W.R. de V.Graham, coll., BMNH(E) 1995-489, 1male; 11.vii.1991, 1male; Vaucluse, nr Saumane, 15.vii.1978, 1male. **IRELAND**: Co. Wicklow, heat Blessington, Russelstown Park, 08.IX.1995, V.Fursov, 1female, 2male; Dublin City, Phoenix Park, 10.IX.1995, 1male. **MADEIRA:** Balcoes, 8.viii.1987, M.W.R. de V.Graham, coll., BMNH(E) 1995-489, 1female; Curral des Romerios, (1), 20.vii.1982, M.W.R. de V.Graham, coll., BMNH(E) 1995-489, 1male; Rabacal, 29.vii.1982, M.W.R. de V.Graham, coll., BMNH(E) 1995-489, Xenomerus ? canariensis, 1male; 6.viii.1987, 1male; Calderao Verde, 9.8.1982, M.W.R. de V.Graham, coll., BMNH(E) 1995-489, 1female; Levada de Serra de Faia, (1) 23.vii.1987, M.W.R. de V.Graham, coll., BMNH(E) 1995-489, 1female; Caramujo (4) 30.vii.1987, 1male. NEPAL: Ktmd. Godavari J00000, 31.V.1967, Mal.Tr.,Can.Exp., 1female; **UKRAINE**: Khersonska Region, Chernomorskij Natural Reserve, 25-31.VIII—1-5.9.1991, leg. S. Storozheva, Holotypus, Trimorus mutator, K.K., 1female; Chernomorskij Natural Reserve, Volozhin Les district, leg. O. Chervonenko, 23.5.1985, 1male; Chernomorskij Natural Reserve, Solenooz. District, Betula forest, 25-30.06.1991, leg. S.Storozheva, 1male; Cherkaska region, Kanev, Knjazja Gora, leg. O. Chervovenko, 13.9.1988, 1male; Khersonska region, Solenooz. District, 25.07.1971, leg. S. Kononova, 1male; UKRAINE, Crimea, Sudak, 15-20.9.1994, leg. S. Simutnik, 1female. **RUSSIA:** Kunashyr Islands, Tretjakova, 21.8.1980, leg. Kononova, 1male; 20.8.80, 1male; 12.8.80, 1male; **REPUBLIC OF SOUTH AFRICA:** Natal, 75km. WSW. Eastcourt, Cathedral Peaks For. Stn., 08-20.XII.1979., S.&J.Peck, 1400m, River shrub, Malaise trap, 1female, 3male; S. of Citrusdal, 05-07.X.1994., M.Soderflund, meadow riverside, 6female; Koemlandskloof, 5-9.X.1994, YPT, M.Soderland, 1male; 150mN Detloop N.R. 10-13.X.1994 MT, fynbos, ravine, M.Soderland, 1female; Richardsbay, 24.X.10.1994, M.Soderland, 1male; Cape Province, Somerset east, Sept.1930., R.E.Turner, Brit.Mus., 1930-480., 1female; **KENYA:** Kajiado Maparasha Hills, 07.14.VIII.1981, I.Dillingham, 1male; Eastern Kirimiri Hill, 1745m, 0°25.45’S 37°32.71’E, 2.ii-16.iii.2005, wet forest nearMt.Kenya, 1female.

Xenomerus comatus, new species

Figures 221-224, 285

FEMALE (HT): Length=1.26 mm. Black; mandible, interantennal process, radicle, A5-6, legs, including coxae, excluding brown last tarsomeres, tegula yellow, A1-A4, A7-A12 brown; **FCI**=1.13; **LCI**=2; **HW/IOS**=1.61; head less than 1,5 times as wide as mesosoma (**HW/TSL**= 1.24); facial striae exceeding midlevel of eye along inner orbit; obscuring frontal patch, frontal patch indistinct; frons setae dense, setae thick, setal base pustulate; central keel complete; toruli triangle shorter than clypeus height; POL less than 2.0 times as long as OOL (**POL/OOL**=1.56); OOL longer than LOL (**OOL/LOL**=1.33); hyperoccipital carina present, blunt, not extending to inner orbit; vertex without sculpture except vertex patch with diameter equal to lateral ocellus; vertex setae denser behind POL area, setal base pustulate; genal patch absent; A1 less than 2.5 times as long as radicle (**A1/r**=2.36), shorter than clava (**A1/cl**=0.86); epomial carina present, diminishing medially; cervical pronotal area smooth, with scattered setae; lateral pronotal dorsomedially reticulate, ventrolaterally smooth; netrion sulcus incomplete; pronotal suprahumeral sulcus diminishing medially, pronotal cervical sulcus complete; both sulci foveolate; mesoscutum more than 1.5 times as wide as long (**TSL/ML**=1.64); notaulus reaching transscutal line; mesoscutum sculpture extending to lateral and inter notaular areas, not reaching posterior margin of mesoscutum; mesoscutellum more than 2.0 times as wide as long (**SW/SL**=2.20); scuto-scutellar sulcus 2 times as wide laterally as in the middle; mesoscutellum smooth, with dense setae, setal base pustulate; posterior scutellar sulcus extending onto axillula; sternaulus not separated from anterior row of foveae of mesopleural carina; distance between postacetabular sulcus and anterior row of foveae of mesopleural carina nearly equal to foveae width of postacetabular sulcus; mesopleural carina complete, with complete rows of foveae, maximal distance between posterior row of foveae of mesopleural carina and mesepimeral sulcus as long as posterior row of foveae of mesopleural carina; sulcus along metapleural carina foveolate; metascutellum sharply pointed; propodeal lateral carinae inverted Y-shaped, shafts slightly curved outward; propodeal lateral and plical areas obscured by pale, thick dense setae, setal base pustulate; marginal striation extending medially; posterior propodeal projection indistinct; forewing as wide as mesoscutum (**TSL/WW**=1.05); marginal vein about 3 times as long as stigmal vein (**m/st**=3.10; hind wing more than 2 times as wide as marginal ciliae length (**HWW/HWS**=2.20); T1 about 2 times as wide as T1+T2 length (**T1W/T1+T2L**=2.13); T3 slightly wider than mesoscutum (**T3W/TSL**=1,12); costae on T3 graduating posteriorly into longitudinally rugoso-punctate sculpture, reaching almost the apex of tergum; lateral patch distinct; two times as long as wide; diameter of posterior patch of T3 nearly equal to width of one basal groove, indistinct; anterior 2/3 of T4 entirely reticulate, with a narrow smooth area medially.

VARIABILITY (n=18): Length=1.08-1.30 mm (m=1.21, SD=0.07); in smaller specimens pronotum, meso-, metapleuron, propodeum and metasoma brown; sometimes A5-6 conclolor with clava;

FCI=1.0-1.17 (m=1.12, SD=0.01); **LCI**=1.8-2.0 (m=1.85, SD=0.08); **HW/IOS**=1.54-1.63 (m=1.6, SD=0.02); **HW/TSL**=1.2-1.38 (m=1.3, SD=0.04); **POL/OOL**=1.4-1.68 (m=1.54, SD=0.07); **OOL/LOL**=1.3-1.45 (m=1.36, SD=0.05); **A1/r**=2.3-2.8 (m=2.58, SD=0.12); **A1/cl**=0.85-0.9 (m=0.88, SD=0.2); **TSL/ML**=1.6-1.82 (m=1.66, SD=0.065); **SW/SL**==2.0-2.28 (m=2.14, SD=0.09); sometimes maximal distance between posterior row of foveae of mesopleural carina and mesepimeral sulcus 2-3 times as wide as width of posterior row of foveae of mesopleural carina; **TSL/WW**=0.94-1.17 (m=1.12, SD=0.06); **m/st**=3-3.3 (m=3.12, SD=0.07); **HWW/HWS**=2.2-2.71 (m=2.44, SD=0.14); **T1W/T1+T2L**=1.92-2..14 (m=2.06, SD=0.07); **T3W/TSL**=1-1.14 (m=1.04, SD=0.04).

MALE (n=12): length=1.15-1.29 (m=1.22, SD=0.05); A1-2 yellow to light brown, A3-A12 light brown to dark brown; head wider (**FCI**=1.14-1.25, m=1.18, SD=0.03) and longer (**LCI**=1.59-1.6, m=1.69, SD=0.04); **HW/IOS**=1.47-1.57 (m=1.52., SD=0.03); **HW/TSL**=1.3-1.53 (m=1.37, SD=0.06); OOL longer (**POL/OOL**=1.2-1.35, m=1.30, SD=0.04); **OOL/LOL**=1.58-1.7, m=1.64, SD=0.04); **A1/r**=3-3.28 (m=3.12, SD=0.1); A3-A6 unibottled, A5 modified; A7-A11 double bottled, with distinct constrictions; antennomeres with few ventral microcilia; **TSL/ML**=1.44-1.59 **(**m=1.5, SD=0.04); **SW/SL**=2.0-2.2 **(**m=2.04, SD=0.07); **TSL/WW**=0.76-0.92 (m=0.85, SD=0.05); **m/st**=3.14-3.41 (m=3.25, SD=0.09); **HWW/HWS**=2.25-2.66 (m=2.39, SD=0.15); metasoma longer (**T1W/T1+T2L**=1.5-1.71, m=1.62, SD=0.07); **T3W/TSL**=0.9-1.15 (m=0.97, SD=0.06); longitudinally rugulous sculpture less distinct;

DIAGNOSIS: Differs from all other species of *Xenomerus* by dense, pale thick setae on frons with setal base pustulate. Most closely related to *X. aureipes* and *X. watshami*, differs by absence of netrion sulcus, few ventral microcilia on male antennomeres, more dense and thick setae on frons and mesosoma, POL/OOL ratio and longitudinally rugoso-punctate sculpture on T3.

ETYMOLOGY: From the Latin coma, meaning hair of the head, referring the dense whitish setae of the frons.

MATERIAL EXAMINED**:** Holotype female: **BENIN**: Abomey-Calavi ca.25 km N.Cotonou, MT, XII.1988. J.S.Noyes. Paratypes: **38 female, male,** with same data as Holotype. Other material examined: Calavi, 1-31.X.1994. G.Georgen MT, 1female. **RHODESIA (ZIMBABWE)**: Salisbury, V.-VII. 1975. A. Watsham, 1female. **IVORY COAST**: Lamto Res.Sta. 5°02' W; 6°13'N, 05.IV.1988 MT, 1female; Boukaé 1.X.1981, 4female; III.1980, 1female; XII. 1980, 1female; III. 1980., P.Cocherau, 5female; IV. 1980, 1female; Lamto, 160 km NW Abijan 5°02'W, 6°13' N, XI.1988. J.S.Noyes MT,PT, 1female;. **NIGERIA**: Oyo Ibadan IITA compound, IX.1987. J.S.Noyes PT, MT, 1female, 1male. **ZIMBABWE**: Harare, Chishawasha, V. 1990. A.Watsham 1female. **CAMEROUN**: Bambili NWP 19.XII.1981. S.Compton, 1female; Nkoemvon, D.Jackson, VIII.1980. MT, 1female; Mbalmayou, VII.1993. P.Eggleton, MT, 1male. **BURKINA FASO:** Gourma Kompiegna (20 km S.Pama) 1-16.vI.1988. Sanborne, Landry & Tou, Savane, lit de riviére, p.á intercept, 1female. **SOMALIA**: Mogadiscio Afgoi-Shabelli Valley, 12.V.1977. F.Bin, Malaise Trap, 1female. **KENYA**: Nyanza, Lake Victoria, 1145 m, 0.615°S, 34.092°E, 17-26.VII.1998. S.Miller, MT ICIPE, 3female;

Nyanza Ungoye, ICIPE site 0.615°S, 34.092°E, 1145 m, 19-29.X.1998. S.Miller, MT, 1female. **UGANDA:** Kibale Forest near Fort Portal, Dec.1972. H.Falke, 1male. **MALAWI**: Mtunthana,k 9.I.-16.II.1983. J.Feehan, MT, 1male. **MALI**: Yanfolia, VIII-IX.1986. J.Durham, MT, 1male. **REPUBLIC OF SOUTH AFRICA**: Richardsbay, 24.X.1994. M.Soderfund, 1male; Kwazulu-Natal, Pietermaritzburg Hilton, 24.xi-9.xii.2003., M.Mostowski, MT., 2female; 28.x-12.xi.2003., 1female. **REPUBLIC OF CENTRAL AFRICA**: Sangha Mbaére, Pk. Nat. Dzanga-Ndoki, 510m. 07.V.2001, S. van Noort, marshland, OSUC 0180718, 2female. Holotype is deposited in SANC; 18 paratypes in CNCI, 10 in BMNH, 5 in SAMC, 5 in NMSA.

COMMENTS: One of the most widely distributed *Xenomerus* species with small variability relative to other common and widely distributed species (*X. ochraceus, X. watshami and X. orientalis*).

Xenomerus cornutus Kononova & Kozlov, 2001

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Trimorus cornutus Kononova & Kozlov, 2001: 165. Original description.

FEMALE (HT)**:** Length=0.71 mm. Brown; radicle, trochanteres and tarsomeres, except last brown tarsomeres yellow; **FCI**=1.16; **LCI**=1.5; **HW/IOS**=1.61; head less than 1.5 times as wide as mesosoma (**HW/TSL**= 1.40); facial striae not reaching midlevel of eye, exceeding frontal patch; frontal patch distinct; frons setae rare, thin; central keel incomplete; POL as long as OOL (**POL/OOL**=1.05); OOL more than 1.5 times as long as LOL (**OOL/LOL**=1.58); hyperoccipital carina absent, vertex entirely reticulate, vertex sculpture extending to interocellar area, merging posteriorly with genal patch; A1 less than 5.0 times as long as radicle (**A1/r**=4.20), shorter than clava (**A1/cl**=0.88); epomial carina absent, cervical pronotal area smooth, with rare setae, setal base pustulate; lateral pronotal area smooth with few crenulae above pronotal ventral projection; netrion sulcus complete; netrional striation not extending onto lateral pronotal area; pronotal suprahumeral and cervical sulci not foveolate; mesoscutum about 1.5 times as wide as long (**TSL/ML**=1.45); notaulus short, not exceeding transscutal line; distance between posterior end of notauli more than two times as long as distance between posterior end of notaulus and posterolateral edge of mesoscutum; reticulate sculpture extending to inter and lateral notaular areas, not reaching posterior margin of mesoscutum; mesoscutellum about 2.0 times as wide as long (**SW/SL**=1.91); scuto-scutellar sulcus almost as wide medially as laterally; mesoscutellum smooth, with rare marginal setae; posterior scutellar sulcus not extending onto axillula; sternaulus not separated from anterior row of foveae of mesopleural carina; mesopleural carina incomplete; sulcus along metapleural carina foveolate; metascutellum triangular, only base striated, with a triangular, semitransparent lamella apically; propodeal lateral carinae inverted V-shaped, shafts straight; propodeal lateral area and plical area with dense setae, marginal striation extending medially; posterior propodeal projection indistinct; mesoscutum slightly wider than fore wing (**TSL/WW**=1.14); marginal vein less than 5 times as long as stigmal vein (**m/st**=4.75); hind wing about as wide as marginal ciliae length (**HWW/HWS**=1.08);

T1 about 1.3 times as wide as T1+T2 length (**T1W/T1+T2L**=1.28); T3 1.5 times as wide as long (**T3W/T3L**=1.50), about 1.2 times as wide as mesoscutum (**T3W/TSL**=1.21); costae on T3 not exceeding 1/5 tergum; lateral patch present, reduced; posterior patch of T3 reduced, nearly equal to width of 2-3 basal grooves; lateral patch on T4 present, median patch absent.

MALE (n=1): legs excluding last brown tarsomeres and antennae yellow; length=0.78; **FCI**=1.21; **LCI**=1.48; **HW/IOS**=1.6; **HW/TSL**=1.29; **POL/OOL**=1.0; **OOL/LOL**=2.0; **A1/r**=2.77; **TSL/ML**=1.42; **SW/SL**=1.78; **TSL/WW**=1.12; **m/st**=4.2; 4.66; **HWW/HWS**=1.07; **T1W/T1+T2L**=1.04; **T3W/TSL**=1.0.

DIAGNOSIS: see diagnosis of *X. calligetus*

MATERIAL EXAMINED: Holotype female: **RUSSIA:** Primorskij Kraj, vicinities of Khanka Lake, 15.8.1977, leg. Kononova, Holotypus Trimorus cornutus K.K. Other material: **JAPAN**: Ibaraki Pref. Tsuchiura City, Shishizuka-Oika, 13-25.VII.1989, MT, M.J.Sharkey, marsh, 1male.

Xenomerus darlingi, new species

Figures 254-256

MALE (HT): Length=1.66 mm. Black, interantennal process, radicle, trochanteres, femora and tibiae apically, tarsomeres excluding last dark brown tarsomere light brown, A1, A2, tegula, coxae, femora and tibiae basally dark brown. **FCI**=1.18; **LCI**=1.74; **HW/IOS**=1.68; head less than 1,5 times as wide as mesosoma (**HW/TSL**= 1.22); facial striae exceeding eye midlevel along inner orbit, obscuring frontal patch; frontal patch indistinct; frons setae rare above, dense below eye midlevel, setae thin and short, setal base pustulate; central keel incomplete, almost reaching medial ocellus; toruli triangle shorter than clypeus height; POL more than two times as long as OOL (**POL/OOL**=2.15); OOL about as long as LOL (**OOL/LOL**=0.92); hyperoccipital carina present, sharp, keel like, not extending to inner orbit; vertex transversely crenulate, with dense long, thin setae, setal base pustulate; genal patch present; A1 more than 5 times as long as radicle (**A1/r**=5.62), A6-A12 unibottled; A5 modified; epomial carina present, diminishing medially; cervical pronotal area smooth, with scattered setae; lateral pronotal area near epomial carina reticulate; netrion sulcus incomplete, netrion striation extending onto lateral pronotal area; pronotal suprahumeral sulcus diminishing medially, foveolate; pronotal cervical sulcus foveolate; mesoscutum less than 1.5 times as wide as long (**TSL/ML**=1.4); notaulus reaching transscutal line; mesoscutum with dense, thin, short setae, setal base punctuate; sculpture extending to posterior margin; mesoscutellum less than 2.0 times as wide as long (**SW/SL**=1.71); scuto-scutellar sulcus slightly diminishing medially, almost as wide medially as laterally; anterior half of mesoscutellum coriaceous; setae on mesoscutellum denser laterally than medially; posterior scutellar sulcus extending onto axillula; one foveae of sternaulus separated from anterior row of foveae of mesopleural carina; distance between postacetabular sulcus and anterior row of foveae of mesopleural carina 4 times as long as foveae width of postacetabular sulcus; mesopleural carina incomplete, almost reaching ventral margin of mesopleuron, anterior and posterior row of

foveae of mesopleural carina diminishing ventrally; distance between posterior row of foveae of mesopleural carina and mesepimeral sulcus as long as posterior row of foveae of mesopleural carina, fovea of mesepimeral sulcus 4-5 times as wide as posterior fovea of mesopleural carina; epicoxal and lower part of metapleural sulci almost merged; sulcus along metapleural carina foveolate; metascutellum sharply pointed; propodeal lateral carinae inverted V-shaped, shafts slightly curved inward; propodeal lateral area and plical area obscured by pale, dense setae, setal base pustulate; marginal striation extending medially; posterior propodeal projection well developed; forewing as wide as mesoscutum (**TSL/WW**=0.97); marginal vein more than 3 times as long as stigmal vein (**m/st**=3.1); hind wing more than 2.5 times as wide as marginal ciliae length (**HWW/HWS**=2.86); T1 less than 2 times as wide as T1+T2 length (**T1W/T1+T2L**=1.39); T3 as wide as mesoscutum (**T3W/TSL**=1.06), with longitudinally rugoso-punctate sculpture extending almost to posterior margin of tergum; basal grooves absent; lateral patch of T3 absent; diameter of posterior patch of T3 nearly three times as large as width of basal grooves on T2; anterior 2/3 of T4 reticulate.

FEMALE: unknown

DIAGNOSIS: Differs from all other species of *Xenomerus* by transversely crenulate vertex behind POL, punctuate setal base on mesoscutum and combination of absence of basal grooves and longitudinally rugoso-punctate sculpture on T3.

ETYMOLOGY: The species name refers to the collector, D. C. Darling.

MATERIAL EXAMINED: Holotype male: **VIETNAM:** Tuyen Quang: Pac Ban. Canopy Malaise trap bottom. 23 MAY-2 JUN 1996, D.C.Currie, D.C.Darling J.Rhydderch. ROM 963073. Holotype is deposited in CNCI.

Xenomerus ergenna Walker, 1836

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Xenomerus Ergenna Walker, 1836: 365. (original description, figured, keyed); Walker, 1874: 7.; Kieffer 1912: 111. (description).

Xenomerus ergenna: Kieffer, 1926: 174. (description); Szabó, 1966 90. (description of male and female); Kozlov, 1978: 628. (keyed); Bin, 1983: 185. (description of male); Kononova and Kozlov 2001:167 (description, keyed).

Teleas Medon Walker, 1836: 364. (original description); Brues, 1908. (junior synonym of *Xenomerus ergenna*), not seen: reference from Johnson (1992); Graham, 1984: 91. (junior synonym of *Xenomerus ergenna* Walker).

Teleas (Xenomerus) ergenna: Blanchard, 1840: 290., not seen: reference from Johnson (1992).

Prosacantha Medon: Marshall, 1873: 15. (generic transfer).

Hoplogryon medon: Kieffer, 1908: 202. (generic transfer, keyed).

Trimorus Medon: Kieffer, 1926:176, 178. (description, keyed).

Niteogryon medon: Szabó, 1966:85. (description of male and female, generic transfer).

Xenomeris (Xenomeris) ergenna: Hellén, 1971: 15. (description, subgeneric assignment, keyed).
Xenomeris (Niteogryon) medon: Hellén, 1971: 15, 16. (description, subgeneric assignment, keyed).
Trimorus medon: Kozlov, 1978: 628. (keyed); Kononova and Kozlov 2001: 167 (description, keyed).
Teleas medon: Graham, 1984: 91. (type information).
Trimorus curtum: Kononova & Petrov, 1999: 21. **NEW SYNONYMY** (original description); Kononova and Kozlov 2001 (description, keyed)

FEMALE (n=25)**:** Length=0.65-0.91 mm (m=0.82, SD=0.11). Dark brown to light brown; radicle, trochanter, A1 proximally, A2 distally, palpus maxillaris, all tarsomere and tibiae apically usually lighter; **FCI**=1.25-1.375 (m=1.31, SD=0.04); **LCI**=1.51-1.6 (m=1.56, SD=0.03); **HW/IOS**=1.5-1.56 (m=1.52, SD=0.02); head less than 1.5 times as wide as mesosoma (**HW/TSL**= 1.29-1.38, m=1.33, SD=0.033); facial striae not reaching midlevel of eye along inner orbit, exceeding frontal patch; frontal patch distinct; frons setae rare, thin; central keel incomplete, sometimes reaching eye midlevel; POL more than two times as long as OOL (**POL/OOL**=2-2.11, m=2.06, SD=0.05); OOL nearly equal LOL (**OOL/LOL**=0.95-1.00, m=0.99, SD=0.02); hyperoccipital carina present, sharp, not extending to inner orbit, in some South African specimens blunt; vertex patch present; genal patch present, not merging with vertex sculpture; A1 less than 4 times as long as radicle (**A1/r**=3.4-3.62, m=3.52, SD=0.09), almost equal clava (**A1/cl**=0.89-0.96, m=0.92, SD=0.03); epomial carina absent, cervical pronotal area smooth, with rare setae; lateral pronotal area with few crenulae above pronotal ventral projection; netrion sulcus complete; netrional striation not extending onto lateral pronotal area; pronotal suprahumeral and cervical sulci not foveolate; mesoscutum about 1.5 times as wide as long (**TSL/ML**=1.5-1.56, m=1.53, SD=0.02); notaulus elongate, almost reaching anterior margin of mesoscutum, distance between posterior end of notauli nearly two times as long as the distance between posterior end of notaulus and posterolateral edge of mesoscutum; reticulate sculpture of mesoscutum not extending to lateral notaular area, not reaching posterior margin of mesoscutum on inter notaular area; mesoscutellum more than 2.0 times as wide as long (**SW/SL**=2.16-2.26, m=2.21, SD=0.05); scuto-scutellar sulcus strongly reduced medially, 5-6 times as wide laterally as in the middle; mesoscutellum smooth, with rare marginal setae; posterior scutellar sulcus not extending onto axillula; sternaulus not separated from anterior row of foveae of mesopleural carina; mesopleural carina incomplete, diminishing above the dorsal part of postacetabular sulcus; sulcus along metapleural carina foveolate; metascutellum triangular, entirely striated, without triangular, semitransparent lamella apically; propodeal lateral carinae inverted V-shaped, shafts straight; propodeal lateral area bare, plical area with few setae along lateral margin, marginal striation not extending medially; posterior propodeal projection indistinct; forewing almost as wide as mesoscutum (**TSL/WW**=0.83-1.00, m=0.89, SD=0.089); marginal vein less than 4 times as long as stigmal vein (**m/st**=3.32-3.45 m=3.36, SD=0.08); hind wing less than two times as wide as marginal ciliae length

(**HWW/HWS**=1.66-1.85 m=1.77, SD=0.07); T1 one and half to two times as wide as T1+T2 length (**T1W/T1+T2L**=1.68-2.00, m=1.98, SD=0.11); T3 more than 1.5 times as wide as long (T3W/T3L=1.78-1.93, m=1.87, SD=0.04), more than 1.2 times as wide as mesoscutum (**T3W/TSL**=1.14-1.23, m=1.21, SD=0.04); costae on T3 not reaching 1/5 tergum; lateral patches absent; diameter of oblique posterior patch of T3, 4 times as long as wide, length nearly equal to width of 7-8 basal grooves, in some South African specimens strongly reduced, not longer than width of 2-3 basal grooves; lateral and median patches on T4 present, not fused.

MALE (n=10): length=0.82-0.89 (m=0.85, SD=0.02); **FCI**=1.41-1.53, (m=1.46, SD=0.04); **LCI**=1.44-1.57, (m=1.50, SD=0.04); **HW/IOS**=1.46-1.58 (m=1.51, SD=0.03); **HW/TSL**=1.28-1.39 (m=1.33, SD=0.04); facial striae exceeding eye midlevel; **POL/OOL**=1.9-2.16 (m=2.04, SD=0.07); **OOL/LOL**=1-1.14 (m=1.03, SD=0.05); **A1/r**=2.17-3.12 (m=2.96, SD=0.12); A5 modified; A7-A11 unibottled; **TSL/ML**=1.34-1.45 **(**m=1.40, SD=0.04); **SW/SL**=2.12-2.33 **(**m=2.22, SD=0.12); **TSL/WW**=0.64-0.78 (m=0.73, SD=0.03); **m/st**=3.58-3.75 (m=3.67, SD=0.07); **HWW/HWS**=1.8-2.0 (m=1.89, SD=0.05); **T1W/T1+T2L**=1.56-1.7, (m=1.62, SD=0.06); **T3W/TSL**=0.94-1.11 (m=1.03, SD=0.05.); in smaller specimens patches on T4 reduced and marked by punctures.

DIAGNOSIS: Differ from other members of ergenna group by POL two times as long as OOL, presence of hyperoccipital carina, wide fore and hind wings, extended posterior patch on T3.

MATERIAL EXAMINED: NETHERLANDS: loc. Rips, N. Brabant, Mal. Trap, Sept.1978., leg. H.J.Vlug, 1female; Lineden, 19.IX.1977., Vlug, 1female. **BELGIUM:** Ottignies, 10-17.VII.1982, P.Dessart, 1male; 19-26.VI.1982, 1male; 10-17.VII.1982, 1male. **GREAT BRITTAIN**: Cheshire, Abbots moss, 21.IX-12.X.1990, D.Notton, MT., 2female; England, Northants, Spratton, VIII.1975, I.&P.Gauld, 1male; England, Manchester, X-XII.1984., N.Springate, 1female; **IRELAND:** B.M. TYPE HYM 9.906, Teleas medon, Stood under this name in old B. M. Collection (Rearranged 1928 J. W.), 1female; Co. Wicklow, heat Blessington, Ausselstown Park, 08.IX.1995., V.Fursov, 1female; Paratype Trimorus curtum K.K., 1female. **SWEDEN:** SÖ, Tyresta NP., Naturv. Verkets dok. Progr. Omr. 4. Malaise falla, 5.VI-15.VII.2000., B. Viklund, L-O, Wikars & H. Ahnlund, 7female; Dalarö, Malmen, viii.1976, 1female, 3male; Höör distr, 11.vi.1983, D.M.S.P.&J.F.P, B.M., 1983-414, 1male; **FRANCE:** Ardéche, Lagorce (Sigaud), 03.V.1997. J.Lenterols, MT, 1female. **HUNGARY:** Biharfüred, biro, 1907, VII. Br(2), 1female; Zamárdi-Felső, 07.IX.1953. Kaszab, 1female. **CZECH REPUBLIC:** Bohemia c. Hlavenec, nr. st. Boleslaw, 05.V.1961., V.Martinek, 1female. **BULGARIA**: Tryavna mnt. Maglish, Malaise trap, T.Lubomirov, 1female; Rhodopi, C. Mesta, 25.V.1987, S.Petrov, Paratypus Trimorus curtum K.K., 1female; Stara Planina, 19.VIII.1987. S.Petrov, Holotypus Trimorus curtum K.K., 1female. **GREECE:** Prionia, 26.VIII.0993., S.Petrov, 1female. **MADEIRA:** Curral dos Romeiros (2) 15.v.1980, M.W.R.de V.Graham, coll. BMNH(E) 1995-489, 2female; Joao do Prado, 26.vii.1982, 1female; Rabacal, (towards Risco) 29.vii.1982, 1male. **UKRAINE**: Cherkaska region, Kanev Natural Reserve, meadows above main building, 4-5.07.2004, leg. S. Simutnik, 1male. **RUSSIA:** Kunashyr, Ju.-Kurilsk vicinities, 3.4.1980, leg. S. Kononova, 1female; Kunashyr,

Tretjakova, 20.8.1980, leg. Kononova, 1female; Vladivostok, Sedanka vicinities, 20.7.1978, leg. Kononova, 1male; Natural Reserve, Svetlaja Poljana district, 5.VI.1978, leg. S. Kononova, 1male. **JAPAN:** Hokkaido, Sapporo, Jozankei, 360m, MT, VIII.1989., K.Maeto&M.Sharkey, 1female; 350m, 10-21.VIII., 1female; Honshu Aichi Pref. Shitara-shi, Uradani, 900m. hill, 15.VIII.2004., V.Fursov, 3female, 3male. **INDIA:** T.Nadu, Shembaganur, x.1979, J.S.Noyes, 1male. **RHODESIA (ZIMBABWE):** Salisbury, Chishawasha, VIII.1979., A.Watsham, 1male. **REPUBLIC OF SOUTH AFRICA:** Natal, 75km WSW. Eastcourt, Cathedral Peaks, For. Stn, 21-31.XII.1979, S.&J. Peck, 1760m, Malaise trap, streamside shrubs, 3female, 1male; Kwazulu-Natal, Pietermaritzburg, 24.xii.2003-14.i.2004, M.Mostovski, MT, 1female, 1male; Kwazulu-Natal, Pietermaritzburg Hilton, 10-23.xii.2003, M.Mostovski, MT, 1female; 11-23.xi.2003., 2female, 1male; 24.xi.09.xii.2003, 1female, 1male; 27.i-16.ii.2004, 2female; 28.x-12.xi.2003, 1male; Western Cape, 14km. SW Clanwilliam; Mt, Podocarpus forest, 5-25.X.2004; M.E.Irwin, F.D.Parker, M.Hauser, 370m, 32˚15'25"S, 18˚49'55"E, 7female, 1male; 140m, 32˚13'39"S 18˚50'50"E, 2female, 1male.

NOTES: Type specimen of *X. ergenna* is not available (presumably lost). On the original drawing of Walker (1836) the widened wings and the presence of hyperoccipital carina distinct. In the Palaearctic region there is no other *Xenomerus* species having this character combination. Members of *Xenomerus ergenna* were reared from eggs of *Dromius* sp. (Carabidae, Dromiini) (Bin, 1981). All African specimens have indistinct or very weak hyperoccipital carina and finely sculptured vertex behind POL. The wide wings, larger distance between posterior and of notauli and POL/OOL makes them easily distinguishable from the African specimens of *X. canariensis*.

Xenomerus feehani, new species

Figures 247, 250, 252, 287

FEMALE (HT)**:** Length=1.15 mm. Dark brown; head, mesoscutum blackish; mandible, interantennal process, radicle, A1-A6, legs, including coxae, excluding last brown tarsomeres yellow; **FCI**=1.16; **LCI**=1.57; **HW/IOS**=1.52; head less than 1.5 times as wide as mesosoma (**HW/TSL**= 1.37); facial striae not reaching midlevel of eye along inner orbit, exceeding frontal patch; frontal patch distinct, not vertically elongated, not reaching eye midlevel; frons setae rare, thin; central keel incomplete, not reaching eye midlevel; toruli triangle shorter than clypeus height; POL as long as OOL (**POL/OOL**=1.07); OOL more than 1.5 times as long as LOL (**OOL/LOL**=1.75); hyperoccipital carina present, blunt, not extending to inner orbit; vertex reticulate, sculpture extending to frons along inner orbit, interocellar area smooth; genal patch present, not merging with vertex sculpture; A1 more than 5.0 times as long as radicle (**A1/r**=5.25), shorter than clava (**A1/cl**=0.89); epomial carina present, diminishing medially; cervical pronotal area smooth, with scattered setae; lateral pronotal area smooth with few crenulae above pronotal ventral projection; netrion sulcus complete; netrional striation not extending onto lateral pronotal area; pronotal suprahumeral and cervical sulci complete, foveolate;

mesoscutum less than 1.5 times as wide as long (**TSL/ML**=1.37); notaulus almost reaching transscutal line; reticulate sculpture of mesoscutum extending to lateral notaular area, not reaching posterior margin of mesoscutum; inter notaular area smooth; mesoscutellum less than 2.0 times as wide as long (**SW/SL**=1.75); scuto-scutellar sulcus slightly diminishing medially, 1.5-2 times as wide laterally as in the middle; mesoscutellum smooth, with rare, marginal setae; posterior scutellar sulcus extending onto axillula; sternaulus not separated from anterior row of foveae of mesopleural carina; distance between postacetabular sulcus and anterior row of foveae of mesopleural carina 3-4 times as wide as foveae width of postacetabular sulcus; mesopleural carina complete, with complete anterior row of foveae, posterior row of foveae of mesopleural carina diminishing and reduced posteroventrally; sulcus along metapleural carina foveolate; metascutellum sharply pointed; propodeal lateral carinae inverted Y-shaped, shafts slightly curved outward; propodeal lateral area and plical area obscured by pale, rare setae, marginal striation extending medially; posterior propodeal projection distinct, well developed; forewing wider than mesoscutum (**TSL/WW**=0.82); marginal vein 3.5 times as long as stigmal vein (**m/st**=3.20); hind wing more than two times as wide as marginal ciliae length (**HWW/HWS**=2.3); T1 concave dorsally, less than 1.5 times as wide as T1+T2 length (**T1W/T1+T2L**=1.21); T3 less than 1.5 times as wide as long (T3W/T3L=1.22), as wide as mesoscutum (**T3W/TSL**=1.07); costae on T3 exceeding apical setae; lateral patches distinct, 3-4 times as long as wide; diameter of posterior patch of T3 nearly equal to width of basal groove; posterior T3 with coriaceous sculpture; anterior half of T4 reticulate, sculpture almost reaching posterior margin of tergum submedially.

VARIABILITY (n=4): Length=1.14-1.17 mm (m=1.15, SD=0.01); **FCI**=1.14-1.16 (m=1.16, SD=0.01); **LCI**=1.57 (m=1.57, SD=0.00); **HW/IOS**=1.5-1.53 (m=1.51 SD=0.01); **HW/TSL**=1.34-1.37 (m=1.35, SD=0.01); **POL/OOL**=0.93-1.07 (m=1.01, SD=0.05); **OOL/LOL**=1.75-2.00 (m=1.87, SD=0.14); **A1/r**=5.00-5.37 (m=5.21, SD=0.15); **A1/cl**=0.82-0.89 (m=0.84, SD=0.03); **TSL/ML**=1.37-1.44 (m=1.41, SD=0.04); **SW/SL**==1.75-1.84 (m=1.80, SD=0.03); **TSL/WW**=0.82-0.83 (m=0.83, SD=0.01); **m/st**=3.50-3.68 (m=3.56, SD=0.08); **HWW/HWS**=2.30-2.50 (m=2.43, SD=0.11); **T1W/T1+T2L**=1.20-1.21 (m=1.20, SD=0.004); **T3W/T3L**=1.22-1.23 (m=1.22, SD=0.004); **T3W/TSL**=1.06-1.07 (m=1.07, SD=0.006)

MALE: unknown

DIAGNOSIS: Most closely related to *X. kalocsai,* differs by POL/OOL, extension of frontal patch and facial striae, sculpture of posterior T3, color of coxae, foveolate sulcus along metapleural carina.

ETYMOLOGY: named after T. Feehan, the collector of the holotype and one of the paratypes.

MATERIAL EXAMINED: Holotype female: **MALAWI**: Mtunthama, 16. II. 1983, J. Feehan, FIT. Paratypes: 1female, with same data as holotype**; TANZANIA:** Uluguru Mts. Nr.Morogoro, 8.VIII.1994. J.LaSalle, 1female. **ZAMBIA**: Nyika Plateau, 7100' 12.VIII.1972. J.Eccott, 1female; **KENYA**: Nyanza Gembe Hills, 1362m, 0°29,36'S 34°14,60'E, 6-13.x.2005, R.Copeland, dry gallery woodland with Olea europaea ssp. cuspidata, 1female. Holotype is deposited in SANC; paratypes in CNCI.

Xenomerus fragilis new species

Figures 171, 259

MALE (HT): Length=0.93 mm. Brown, interantennal process, radicle, A1 proximally, legs including coxae excluding last dark brown tarsomeres, light brown; **FCI**=1.28; **LCI**=1.53; **HW/IOS**=1.52; head less than 1,5 times as wide as mesosoma (**HW/TSL**
= 1.36); facial striae extending to frons; frontal patch distinct; frons setae rare; central keel incomplete; toruli triangle shorter than clypeus height; POL about 1.5 times as long as OOL (**POL/OOL**=1.57); OOL longer LOL (**OOL/LOL**=1.40); hyperoccipital carina absent; vertex reticulate, reticulate sculpture of vertex not merging with genal patch; A1 more than 6 times as long as radicle (**A1/r**=6.4); A3-A7 unibottled, A8-A11 dibottled; A5 modified; epomial carina absent; cervical pronotal area laterally, lateral pronotal area dorsomedially reticulate; netrion sulcus complete, netrion striation not extending to lateral pronotal area; pronotal suprahumeral and cervical sulci complete, foveolate; mesoscutum less than 1.5 times as wide as long (**TSL/ML**=1.34); notaulus reaching transscutal line; mesoscutum with rare, thin setae; mesoscutum sculpture not extending to inter and lateral notaular areas; mesoscutellum less 2.0 times as wide as long (**SW/SL**=1.77); scuto-scutellar sulcus diminishing medially, 4 times as wide laterally as in the middle; mesoscutellum smooth with rare, long, marginal setae; posterior scutellar sulcus not extending onto axillula; sternaulus distinctly separated from anterior row of foveae of mesopleural carina; mesopleural carina incomplete; sulcus along metapleural carina not foveolate; metascutellum sharply pointed; propodeal lateral carinae inverted V-shaped, shafts slightly curved inward; propodeal lateral and plical areas obscured by rare, thin setae; marginal striation not extending medially; posterior propodeal projection distinct, tubercle like; forewing wider than mesoscutum (**TSL/WW**=0.80); hind wing almost 1.5 times as wide as marginal ciliae length (**HWW/HWS**=1.41); T1 almost as wide as T1+T2 length (**T1W/T1+T2L**=1.21); T3 as wide as mesoscutum (**T3W/TSL**=1.02); basal grooves present on T3, some costae reaching half tergum submedially; lateral patch present, 4 times as long as wide; diameter of posterior patch of T3 equal to width of 2 basal grooves; only lateral patch on T4 present.

FEMALE: unknown

DIAGNOSIS: Differs from all other *Xenomerus* species in having A3-A7 unibottled, A8-A11 dibottled. Most closely related to *X. madag*, differs in incomplete central keel, separated genal patch, shorter radicle, notaulus reaching transscutal line.

ETYMOLOGY: From the latin fragilis, meaning fragile, referring the elongated, thin antennomeres.

MATERIAL EXAMINED: Holotype male: **MALAWI:** Mtunthama, 16.II.83, FIT, T. Feehan. Holotype is deposited in SANC.

Xenomerus fulleri new species

MALE (HT): Length=0.83 mm. Brown, interantennal process, radicle, A3-A12 apically, A1, A2, legs, including coxae, excluding brown hind tibia and hind tarsomeres, yellow; **FCI**=1.27; **LCI**=1.60; **HW/IOS**=1.52; head almost 1.5 times as wide as mesosoma (**HW/TSL**= 1.45); facial striae not extending to frons, not reaching frontal patch; frontal patch distinct; frons setae rare, thin; central keel absent; toruli triangle closed dorsally, shorter than clypeus height; POL equal OOL (**POL/OOL**=1.0); OOL more than two times as long as LOL (**OOL/LOL**=2.14); hyperoccipital carina present, blunt, not extending to inner orbit; vertex patch present, with diameter equal to lateral ocellus; interocellar area smooth; genal patch present; A1 3 times as long as radicle (**A1/r**=3.00); A3-A12 unibottled; A5 not modified; epomial carina absent; cervical pronotal area smooth; netrion sulcus incomplete, netrion striation extending to and almost obscuring entirely lateral pronotal area; pronotal suprahumeral and cervical sulci complete, foveolate; mesoscutum less than 1.5 times as wide as long (**TSL/ML**=1.4); notaulus elongate, exceeding transscutal line; mesoscutum with rare, thin setae; mesoscutum sculpture not extending to inter and lateral notaular areas, mesoscutellum 2.0 times as wide as long (**SW/SL**=2.0); scuto-scutellar sulcus distinctly diminishing medially, 3 times as wide laterally as in the middle, not foveolate between notauli; mesoscutellum smooth, with rare, long, thin marginal setae; posterior scutellar sulcus extending onto axillula; sternaulus not separated from anterior row of foveae of mesopleural carina; mesopleural carina incomplete; sulcus along metapleural carina not foveolate; metascutellum bluntly triangular, basal striation not extending apically; propodeal lateral carinae inverted V-shaped, shafts straight; propodeal lateral area bare; plical area with rare thin setae; marginal striation not extending medially; posterior propodeal projection indistinct; forewing wider than mesoscutum (**TSL/WW**=0.87); marginal vein more than 3 times as long as stigmal vein (**m/st**=3.50); hind wing as wide as marginal ciliae length (**HWW/HWS**=1.05); T1 slightly wider than T1+T2 length (**T1W/T1+T2L**=1.29); mesoscutum about as wide as T3 (**T3W/TSL**=0.93), basal grooves present on T3; costae on T3 not reaching 1/5 tergum; lateral patch present, circular in shape, reaching lateral margin of tergum, as wide as diameter of 2-3 basal grooves; diameter of posterior patch of T3 equal to width of two basal grooves on T3; lateral patch on T4 present, median patch absent.

FEMALE: unknown

DIAGNOSIS: Most closely related to *X. noyesi*, differs by presence of basal grooves on T3, foveolate, complete, and foveolate suprahumeral sulcus, not separated sternaulus, wider mesoscutellum and not modified A5.

ETYMOLOGY: The species name refers to its collector, E. Fuller.

MATERIAL EXAMINED: Holotype male: **THAILAND:** Chiang Mai, 1300m Doi Inthanon N. P. 7-12.V.1990, E. Fuller, MT. Holotype is deposited in CNCI.

Xenomerus gloriosus *new species*

Figures 242, 243

FEMALE (HT)**:** Length=1.28 mm. Dark Brown, radicle, A1 proximally, A5,6, legs excluding coxa and last dark brown tarsomere of all leg, yellow; **FCI**=1.21; **LCI**=1.56; **HW/IOS**=1.45; head less than 1.5 times as wide as mesosoma (**HW/TSL**=1.35); facial striae reaching midlevel of eye, parallel on frons, obscuring frontal patch; frontal patch distinct; frons setae rare, thin; central keel complete, strongly diminishing dorsally; toruli triangle shorter than clypeus height; POL about 1.5 times as long as OOL (**POL/OOL**=1.55); OOL less than 1.5 times as long as LOL (**OOL/LOL**=1.28); hyperoccipital carina present, blunt, extended to inner orbit; vertex entirely reticulate, sculpture not extending anteriorly to frons; genal patch present, separated from vertex sculpture; A1 more than 5.0 times as long as radicle (**A1/r**=5.75), as long as clava (**A1/cl**=1.0); A4 distinctly shorter than A3; epomial carina present, almost reaching pronotal suprahumeral sulcus; cervical pronotal area smooth, with rare setae; lateral pronotal area reticulate dorsally; netrion sulcus complete, netrion as wide as fore coxa; pronotal suprahumeral and cervical sulci complete, foveolate; mesoscutum about 1.5 times as wide as long (**TSL/ML**=1.47); notaulus normal, almost reaching transscutal line; reticulate sculpture of mesoscutum slightly extending to inter and lateral notaular areas, not reaching posterior margin; mesoscutellum less than 2.0 times as wide as long (**SW/SL**=1.85); scuto-scutellar sulcus distinctly diminishing medially, 4-5 times as wide laterally as in the middle; mesoscutellum smooth, with rare, long marginal setae; posterior scutellar sulcus not extending onto axillula; sternaulus not separated from anterior row of foveae of mesopleural carina; distance between postacetabular sulcus and anterior row of foveae of mesopleural carina equal to foveae width of postacetabular sulcus; mesopleural carina complete, with complete rows of foveae; foveae of mesepimeral sulcus transversely elongated, 2.3 times as wide as high, distance between mesepimeral sulcus and posterior row of fovea of mesopleural carina equal to width of posterior row of foveae; sulcus along metapleural carina foveolate; metascutellum bluntly triangular, metanotal spine reduced; propodeal lateral carinae inverted Y-shaped, shafts distinctly curved outward; propodeal lateral and plical areas obscured by pale, dense setae, marginal striation extending medially; posterior propodeal projection indistinct; mesoscutum almost as wide as forewing (**TSL/WW**=0.92); marginal vein less than 3.5 times as long as stigmal vein (**m/st**=3.24); hind wing less than two times as wide as marginal ciliae length (**HWW/HWS**=1.75); T1, slightly wider than T1+T2 length (**T1W/T1+T2L**=1.18); T3 less than 1.5 times as wide as long (**T3W/T3L**=1.29), as wide as mesoscutum (**T3W/TSL**=1.05); costae on T3 not extending to 1/5 of tergum; lateral patch of T3 distinct, elongate, 4-5 times as long as wide; posterior patch of T3 nearly equal to width of one basal grooves; anterior half of T4 reticulate with narrow, smooth median area.

MALE : unknown

DIAGNOSIS: Most closely related to *X. bickeli*, differs by A4 distinctly shorter than A3, presence of frontal patch, POL/OOL, wider netrion, reduced metanotal spine and presence of posterior patch on T3.

ETYMOLOGY: the name is refers to the type locality.

MATERIAL EXAMINED: Holotype female: **AUSTRALIA:** Qld. Mount. Glorious, 28.II.1984, L.Masner. Holotype is deposited in SAMA.

Xenomerus guinensis, new species

Figures 206, 210

FEMALE (HT): Length=1.07 mm. Ochre; A2-A12, head, excluding interantennal process, , mesoscutellum and metasoma brown, pronotum, excluding ochre netrion reddish **FCI**=1.26; **LCI**=1.93; **HW/IOS**=1.77; head less than 1,5 times as wide as mesosoma (**HW/TSL**= 1.33); facial striae not exceeding midlevel of eye, obscured frontal patch; frontal patch distinct; frons setae rare, setae thin; central keel incomplete; toruli triangle shorter than clypeus height; POL longer than OOL (**POL/OOL**=1.23); OOL about 1.5 times as long as LOL (**OOL/LOL**=1.54); hyperoccipital carina absent; vertex without sculpture except vertex patch, with diameter less than lateral ocellus width; vertex with few scattered setae behind POL; genal patch absent; A1 less than 5 times as long as radicle (**A1/r**=4.16), as long as clava (**A1/cl**=1.04); epomial carina absent; cervical pronotal area smooth, with scattered setae and reticulate sculpture along lateral and dorsal margin; lateral pronotal area reticulate dorsally, netrion sulcus incomplete; pronotal suprahumeral sulcus diminishing medially, foveolate; pronotal cervical sulcus not foveolate; anterior tip of pronotum reduced; mesoscutum about 2 times as wide as long (**TSL/ML**=1.82), with dense setae, sculpture reaching posterior margin; notaulus absent; mesoscutellum 2.0 times as wide as long (**SW/SL**=2.02); scuto-scutellar sulcus slightly diminishing medially, about 1.5 times as wide laterally as in the middle; mesoscutellum smooth, with dense setae laterally, smooth medially; posterior scutellar sulcus extending onto axillula; sternaulus not separated from anterior row of foveae of mesopleural carina; distance between postacetabular sulcus and anterior row of foveae of mesopleural carina two times as long as fovea width of postacetabular sulcus; mesopleural carina complete, with complete rows of foveae, maximal distance between posterior row of foveae of mesopleural carina and mesepimeral sulcus 1.5 as long as width of posterior row of foveae; sulcus along metapleural carina foveolate; metascutellum bluntly triangular, entirely striated; propodeal lateral carinae S- shaped; propodeal lateral area and plical area obscured by rare setae, marginal striation extending medially; posterior propodeal projection indistinct; hind wing more than 2 times as wide as marginal ciliae length (**HWW/HWS**=2.28); **m/st**=3.5; T1 less than 1.5 times as wide as T1+T2 length (**T1W/T1+T2L**=1.44); T3 about as wide as mesoscutum (**T3W/TSL**=0.96); basal grooves narrow; costae exceeding 1/2 of tergum; lateral patch absent; diameter of posterior patch of T3 nearly equal to width of two basal grooves, distinct; T3 with rare setae laterally; lateral patch on T4 present, median patch absent.

DIAGNOSIS: Shared with *X. ochraceus* the incomplete central keel and differs by rare setae on frons, thin basal grooves and long costae on T3, exceeding to middle of tergum. Most closely related to *X. yamagishi*, differs by incomplete central keel and coloration.

ETYMOLOGY: The name of the species refers to the type locality.

MATERIAL EXAMINED: Holotype female: **PAPUA NEW GUINEA**: East New Britain, Bainings Mts. Raunsopna, 30.VI-28.VII.1999. C.Mitparingi, Malaise trap. Holotype is deposited in SAMA.

Xenomerus halteratus, new species

Figures 173, 213, 215, 217, 219, 282

FEMALE (HT): Length=1.02 mm. Orange yellow, A3-A12, interocellar area, mesoscutellum, metasoma apically brown; **FCI**=1.20; **LCI**=1.54; **HW/IOS**=1.70; head less than 1,5 times as wide as mesosoma (**HW/TSL**= 1.36); facial striae extending to vertex obscuring frontal patch; frontal patch distinct; frons setae dense, setae thin, setal base pustulate, median smooth area above interantennal process 4-5 times as wide as clypeus width; frons above median smooth area rugulous; central keel complete; toruli triangle shorter than clypeus height, not reaching eye midlevel; POL shorter than OOL (**POL/OOL**=0.72); OOL about 2.5 times as long as LOL (**OOL/LOL**=2.57); hyperoccipital carina present, blunt, not extending to inner orbit; vertex entirely granulose sculpture extending to gena and obscuring genal patch; A1 more than 7 times as long as radicle (**A1/r**=7.14), about as long as clava (**A1/cl**=1.14); epomial carina absent; cervical pronotal area with transverse crenulae, lateral pronotal area coriaceous, cells of coriaceous sculpture ordering to vertical rows; netrion sulcus complete; pronotal suprahumeral and cervical sulci not foveolate; mesoscutum more than 1.5 times as wide as long (**TSL/ML**=1.81); notaulus shortened, not reaching transscutal line; mesoscutum with dense thin setae, granulose sculpture reaching posterior margin; mesoscutellum more than 2.0 times as wide as long (**SW/SL**=2.10); scuto-scutellar sulcus slightly diminishing, 2 times as wide laterally as in the middle; mesoscutellum coriaceous anteriorly, with dense, thin setae; posterior scutellar sulcus extending onto axillula; sternaulus not separated from anterior row of foveae of mesopleural carina; distance between postacetabular sulcus and anterior row of foveae of mesopleural carina 2-3 times as long as foveae width of postacetabular sulcus; mesopleural carina complete, with complete rows of foveae, maximal distance between posterior row of foveae of mesopleural carina and mesepimeral sulcus three times as long as width of posterior row of foveae of metapleural carina; epicoxal and lower part of metapleural sulci separated; sulcus along metapleural carina foveolate; metascutellum bluntly triangular, basal striation extending apically; propodeal lateral carinae inverted V-shaped, shafts slightly curved inward; propodeal lateral and plical areas obscured by pale, dense setae, setal base pustulate; marginal striation extending medially; posterior propodeal projection distinct; fore and hind wings reduced; T1 more than 2.5 times as wide as T1+T2 length (**T1W/T1+T2L**=2.66); T3 as wide as mesoscutum (**T3W/TSL**=1.03), costae on T3 reaching 1/3 of tergum; posterior 2/3 of tergum reticulate, lateral and posterior patches indistinct, obscured by reticulate sculpture; T4 entirely reticulate;

VARIABILITY (n=9): Length=0.92-1.09 mm (m=0.99, SD=0.06); in smaller specimens body lighter; **FCI**=1.18-1.27 (m=1.22, SD=0.03); **LCI**=1.54-1.77 (m=1.65, SD=0.07); **HW/IOS**=1.57-1.77 (m=1.68, SD=0.06); **HW/TSL**=1.32-1.41 (m=1.37, SD=0.03); **POL/OOL**=0.64-0.75 (m=0.70,

SD=0.07); **OOL/LOL**=2.40-2.66 (m=2.55, SD=0.09); **A1/r**=5.75-7.33 (m=6.53, SD=0.54); **A1/cl**=1.0-1.16 (m=1.10, SD=0.03); **TSL/ML**=1.64-1.83 (m=1.72, SD=0.08); **SW/SL**==2.0-2.25 (m=2.14, SD=0.10); one specimen fully winged**, TSL/WW**=1.17; **m/st**=4.28; **HWW/HWS**=1.53; **T1W/T1+T2L**=1.25-2.66 (m=1.88, SD=0.48); **T3W/TSL**=0.93-1.11 (m=1.03, SD=0.06).

MALE: unknown

DIAGNOSIS: Most closely related to *X. melleus*, differs in rugulous frons, shortened wing and complete mesopleural carina. Differs from *X. rugifrons* by shorter toruli triangle, shorter radicle, not foveolate pronotal suprahumeral sulcus, shorter notaulus, netrion striation not extending onto lateral pronotal area, bluntly triangular metascutellum, reduced wings, posteriorly reticulate T3 and entirely sculptured T4.

ETYMOLOGY: The species name refers to the reduced wings.

MATERIAL EXAMINED: Holotype female: **AUSTRALIA:** Qld. 630km. Mt. Glorious N. P. Feb.28.1984, s.s., L.Masner, Trop. rain & sclerophyl for. Mixed, s.s. Paratypes: 21female with same data as holotype (one specimen on slide); Qld.700m Mt.Tamborine N. P. March 3.1984, s.s., L.Masner, Sclerophyl Eucalyptus forest, 5female; Qld. Mt. Glorious, 27 19'54"S 152 45'29"E, 17-23.I.1998., N.Power, malaise trap, 1female; Queensland Main Range Nat. Park 28 03'01"S 152 23'59"E, 9.XII.2002, Owen, George Munro, sweeping, 1female; QLD. Mt.Glorious N. P. II.1989, H.Howden, 1female; ACT, Canberra, Black Mtn. 35 16'S 149 06'E, 7-13.XII.1998, G.Gibson, yellow pan tp, 1female.

Other material examined: NSW, Barrington Tops SF, 1000m., Feb.11.1984 L.Masner,s.s, 1female. Holotype and 10 paratypes are deposited in SAMA; 20 paratypes in CNCI.

Comments: There is only one specimen (NSW, not involved into paratype series) with well developed wings. Most of the variability of different indexes (HW/IOS, A1/r, T1W/T1+T2L) could be resulted by the differences between the winged and brachypterous specimens.

Xenomerus hilleri *new species*

Figures 166, 169

MALE (HT)**:** Length=1.27 mm. Dark brown, radicle, A1, legs excluding coxae and last dark brown tarsomeres yellow; **FCI**=1.24; **LCI**=1.64; **HW/IOS**=1.55; head less than 1.5 times as wide as mesosoma (**HW/TSL**=1.31); facial striae, reaching midlevel of eye, strongly diminishing dorsally, parallel on frons, obscuring frontal patch; frontal patch distinct; frons setae rare, thin; central keel complete, strongly diminishing dorsally; toruli triangle shorter than clypeus height; POL more than 1.5 times as long as OOL (**POL/OOL**=1.75); OOL less than 1.5 times as long as LOL (**OOL/LOL**=1.28); hyperoccipital carina present, blunt, not extending to inner orbit; vertex entirely reticulate, sculpture slightly extending anteriorly to frons; genal patch present separated from vertex sculpture; A1 less than 5.0 times as long as radicle (**A1/r**=4.66), A5 not modified, A3-A6 unibottled, A7-11 dibottled; epomial carina present, diminishing medially; cervical and lateral pronotal areas smooth; netrion

sulcus complete, netrion as wide as fore coxa; pronotal suprahumeral and cervical sulci complete, foveolate; mesoscutum less than 1.5 times as wide as long (**TSL/ML**=1.37); notaulus normal, almost reaching transscutal line; reticulate sculpture of mesoscutum not extending to inter and lateral notaular areas; mesoscutellum 2.0 times as wide as long (**SW/SL**=2.04); scuto-scutellar sulcus distinctly diminishing medially, 4-5 times as wide laterally as in the middle; mesoscutellum smooth, with rare, long marginal setae; posterior scutellar sulcus not extending onto axillula; sternaulus not separated from anterior row of foveae of mesopleural carina; mesopleural carina incomplete; foveae of mesepimeral sulcus transversely elongated; sulcus along metapleural carina foveolate; metascutellum bluntly triangular, metanotal spine reduced; propodeal lateral carinae inverted V-shaped, shafts distinctly curved outward; propodeal lateral and plical areas obscured by dense setae, marginal striation extending medially; posterior propodeal projection indistinct; forewing distinctly wider than mesoscutum (**TSL/WW**=0.72); marginal vein more than 3.5 times as long as stigmal vein (**m/st**=3.84); hind wing about 1.5 times as wide as marginal ciliae length (**HWW/HWS**=1.66); T1, slightly wider than T1+T2 length (**T1W/T1+T2L**=1.18); T3 less than 1.5 times as wide as long (T3W/T3L=1.30), about as wide as mesoscutum (**T3W/TSL**=0.90); costae on T3 not extending to 1/5 of tergum; lateral patch distinct, elongate, 4-5 times as long as wide; posterior patch of T3 nearly equal to width of one basal groove; lateral patch on T4 present, median patch marked by punctures.

FEMALE : unknown

DIAGNOSIS: Most closely related to *X. gloriosus*, differs by incomplete mesopleural carina.

ETYMOLOGY: the name is refers to the collector of the species, T. Hiller.

MATERIAL EXAMINED: Holotype female: **AUSTRALIA:** Qld. Mount Glorious, 27 19’54”S, 152 45’29”E, 24-30.I.1998, T.Hiller, Malaise trap. Holotype is deposited in SAMA.

NOTES: Differs from *X. gloriosus* only by the incomplete mesopleural carina. Whether the completeness of mesopleural carina is inter- or intraspecific variability requires examination of more specimens.

Xenomerus kalocsai, new species

Figures 176, 248, 249, 251, 288

FEMALE (HT)**:** Length=0.96 mm. Dark brown; mandible, interantennal process, radicle, A1 proximally, trochanteres, tibiae, tarsomeres except dark brown last tarsomeres, light brown; **FCI**=1.18; **LCI**=1.61; **HW/IOS**=1.51; head less than 1.5 times as wide as mesosoma (**HW/TSL**= 1.32); facial striae not reach midlevel of eye along inner orbit, not exceeding frontal patch; frontal patch distinct, vertically elongated, reaching eye midlevel; frons setae rare, thin; central keel incomplete, not reaching eye midlevel; toruli triangle shorter than clypeus height; POL less than 1.5 times as long as OOL (**POL/OOL**=1.46); OOL almost 1.5 times as long as LOL (**OOL/LOL**=1.44); hyperoccipital carina present, blunt, not extending to inner orbit; vertex reticulate; genal patch present, separated from vertex sculpture; A1 more than 6.0 times as long as radicle (**A1/r**=6.5), shorter than clava

(**A1/cl**=0.82); epomial carina present, diminishing medially; cervical pronotal area smooth, with scattered setae; lateral pronotal area near epomial carina reticulate, with few crenulae above pronotal ventral projection; netrion sulcus complete; netrional striation not extending onto lateral pronotal area; pronotal suprahumeral and cervical sulci complete, foveolate; mesoscutum less than 1.5 times as wide as long (**TSL/ML**=1.34); notaulus normal, reaching transscutal line; reticulate sculpture of mesoscutum extending to lateral and inter notaular areas; mesoscutellum less than 2.0 times as wide as long (**SW/SL**=1.88); scuto-scutellar sulcus distinctly diminishing medially, 4 times as wide laterally as in the middle; mesoscutellum smooth, with rare setae; posterior scutellar sulcus not extending onto axillula; sternaulus not separated from anterior row of foveae of mesopleural carina, distance between postacetabular sulcus and anterior row of foveae of mesopleural carina 3-4 times as wide as foveae width of postacetabular sulcus; mesopleural carina complete, with complete anterior row of foveae, posterior row of foveae strongly diminishing and reduced posteroventrally; sulcus along metapleural carina not foveolate; metascutellum sharply pointed; propodeal lateral carinae inverted V-shaped, shafts slightly curved outward; propodeal lateral and plical areas obscured by pale, rare setae, marginal striation extending medially; posterior propodeal projection distinct; forewing wider than mesoscutum (**TSL/WW**=0.85); marginal vein less than 3.5 times as long as stigmal vein (**m/st**=3.2); hind wing two times as wide as marginal ciliae length (**HWW/HWS**=2); T1 concave dorsally, about 1.5 times as wide as T1+T2 length (**T1W/T1+T2L**=1.47); T3 1.5 times as wide as long (T3W/T3L=1.5), wider than mesoscutum (**T3W/TSL**=1.125), costae on T3 exceeding middle of tergum, not exceeding apical setae; lateral patches distinct, 3-4 times as long as wide; diameter of posterior patch of T3 nearly equal to width of one basal groove; posterior T3 without coriaceous sculpture; lateral and median patches present, not fused.

VARIABILITY (n=10): Length=0.96-1.32 mm (m=1.04, SD=0.12); head, mesosoma and metasoma black in larger specimens; **FCI**=0.98.1.18 (m=1.14, SD=0.06); **LCI**=1.5-1.67 (m=1.58, SD=0.05); **HW/IOS**=1.44-1.57 (m=1.51, SD=0.04); **HW/TSL**=1.26-1.35 (m=1.36, SD=0.04); in smaller specimens facial striae extending along inner orbit near orbital patch; in larger specimens central keel almost reaching median ocellus **POL/OOL**=1.38-1.58 (m=1.47, SD=0.08); **OOL/LOL**=1.23-1.44 (m=1.35, SD=0.07); in larger specimens from Uganda vertex sculpture indistinct; **A1/r**=5.5-6.7 (m=6.27, SD=0.4); **A1/cl**=0.84-0.92 (m=0.88, SD=0.02); **TSL/ML**=1.33-1.42 (m=1.36, SD=0.03); **SW/SL**==1.76-1.88 (m=1.83, SD=0.05); in larger specimens anterior row of foveae of mesopleural carina present posteroventrally **TSL/WW**=0.82-0.92 (m=0.86, SD=0.03); **m/st**=3.26-3.32 (m=3.28, SD=0.05); **HWW/HWS**=1.92-2.16 (m=2.05, SD=0.08); **T1W/T1+T2L**=1.4-1.56 (m=1.45, SD=0.05); **T3W/T3L**=1.42-1.54 (m=1.47, SD=0.04); **T3W/TSL**=1.12-1.26 (m=1.17, SD=0.05), in larger specimens costae extending to lateral patch on T3.

MALE: unknown

DIAGNOSIS: Most closely related to *X. feehani*, differs by POL/OOL, extension of frontal patch and facial striae, sculpture of posterior T3, color of coxae, reduction of posterior row of foveae of mesopleural carina and foveolate sulcus along metapleural carina.

ETYMOLOGY: named after Béla Kalocsa, who was the first teacher in biology of junior author.

MATERIAL EXAMINED: Holotype female: **RHODESIA (ZIMBABWE)**: Salisbury, I-IV, 1976, A. Watsham. Paratypes: 1female, with same data as holotype**;** Nov.1981., 1female;. V.-VII. 1976., 1female; pan trap. Jan.1981., 1female. **CAMEROON**: Mbalmayo, VII.1993. P.Eggleton, MT, 2female; Mawdsley, 1female; Nkoemvon, 21.1.VII.80. P.Jackson, MT, 1female. Other material examined: **UGANDA**: District Masindi, Budongo Forest n. Sonso, 1 45,31 35 E, 11-20.VII.95, Th.Wagner leg, 1female; 19-30.VI.95., 1female. **MALAWI**: Mtunthama, 9.1-16.II. 1983, J.Feehan, MT, 1female; **KENYA**: Eastern Krimiri Hill, 1745m, 0˚25.45'S 37˚32.71'E, 2-16.iii.2005, wet forest near Mt.Kenya 2female. Holotype is deposited in SANC; Paratypes in CNCI.

COMMENTS: Variability of most ratios could be resulted by allometric change.

Xenomerus laticeps Dodd

Figures 170, 235, 236, 238, 240

Xenomerus laticeps Dodd, 1916: 28. Original description. Dodd, 1930:89, 90 (description, keyed).

FEMALE (n=5)**:** Length= 0.99-1.18mm (m=1.11, SD=0.08). Dark brown; head, mesoscutum blackish; mandible, apex of interantennal process, radicle, legs excluding hind brown tarsomeres yellow, antenna dark brown; **FCI**=1.14-1.21 (m=1.17, SD=0.02); **LCI**=1.74-1.78 (m=1.77, SD=0.01); **HW/IOS**=1.50-1.62, m=1.56 SD=0.04); head almost 1.5 times as wide as mesosoma (**HW/TSL**=1.41-1.52, m=1.46, SD=0.05); facial striae exceeding midlevel of eye, parallel on frons, obscuring frontal patch; frontal patch indistinct; frons setae rare, thin; central keel complete; toruli triangle shorter than clypeus height; POL as long as OOL (**POL/OOL**=0.95-1.1, m=1.03, SD=0.05); OOL about 2 times as long as LOL (**OOL/LOL**=2.0-2.1, m=2.04, SD=0.06); hyperoccipital carina absent; sometimes vertex finely reticulate, vertex sculpture merges with vertex patch, sometimes only vertex patch present, vertex smooth posterior to POL; genal patch present; A1 about 5 times as long as radicle (**A1/r**=5.0-5.62, m=5.18, SD=0.25), about as long as clava (**A1/cl**=0.94-1.1, m=1.01, SD=0.05); epomial carina absent, cervical and lateral pronotal areas smooth, bare; netrion sulcus absent; netrional striation extending onto lateral pronotal area; pronotal suprahumeral and cervical sulci complete, foveolate; mesoscutum about 1.5 times as wide as long (**TSL/ML**=1.54-1.59, m=1.57, SD=0.02); notaulus normal, almost reaching transscutal line; reticulate sculpture of mesoscutum not extending to inter and lateral notaular areas; mesoscutellum more than 2.0 times as wide as long (**SW/SL**=2.2-2.5, m=2.33, SD=0.13); scuto-scutellar sulcus diminishing medially, 4-5 times as wide laterally as in the middle; mesoscutellum smooth, with rare, long marginal setae; posterior scutellar sulcus not extending onto axillula; sternaulus not separated from anterior row of foveae of mesopleural carina; distance between postacetabular sulcus and anterior row of foveae of mesopleural carina equal to foveae width of

postacetabular sulcus; mesopleural carina complete, with complete rows of foveae; foveae of mesepimeral sulcus not elongated, 1-1.5 times as long as wide; sulcus along metapleural carina foveolate; metascutellum sharply pointed, spine elongated; propodeal lateral carinae inverted Y-shaped, shafts distinctly curved outward; propodeal lateral area and plical area obscured by pale, dense setae, setal base pustulate, marginal striation not extending medially; posterior propodeal projection indistinct; forewing about as wide as mesoscutum (**TSL/WW**=0.93-1.08, m=0.98, SD=0.06); marginal vein 3 times as long as stigmal vein (**m/st**=2.9-3.1, m=3.0, SD=0.07); hind wing about two times as wide as marginal ciliae length (**HWW/HWS**=1.86-2.14, m=1.98, SD=0.10); T1, less than 1.5 times as wide as T1+T2 length (**T1W/T1+T2L**=1.23-1.48, m=1.32, SD=0.09); T3 about 1.5 times as wide as long (**T3W/T3L**=0.97-1.01, m=1.0, SD=0.01), as wide as mesoscutum (**T3W/TSL**=0.97-1.01, m=1.0, SD=0.01); costae on T3 reaching 1/2 of tergum medially; lateral patch distinct, reduced; diameter of posterior patch of T3 nearly equal to width of two basal grooves, sometimes posterior and lateral patches more extended, diameter of posterior patch equal with 4 basal grooves; lateral patch on T4 present, median patch marked by punctures.

MALE: (n=5): **FCI**=1.25-1.31 (m=1.26, SD=0.02); **LCI**=1.54-1.74 (m=1.63, SD=0.06); **HW/IOS**=1.41-1.51, (m=1.46 SD=0.03); **POL/OOL**=0.81-0.95 (m=0.89, SD=0.05); **OOL/LOL**=2.27-2.50 (m=2.38, SD=0.08); **A1/r**=4.1-4.4 (m=4.22, SD=0.14); A5 not modified, A2-A6 unibottled, A7-A11 dibottled, antennomeres with few ventral microcilia; **SW/SL**==2.0-2.11 (m=2.05, SD=0.04); **TSL/WW**=0.8-0.96 (m=0.86, SD=0.07); **T1W/T1+T2L**=1.16-1.24 (m=1.23, SD=0.05);

DIAGNOSIS: Most closely related to *X. varipes*, differs by presence of vertex patch, few ventral microcilia on male antennomeres, finely reticulate mesoscutum of females, absence of netrion sulcus, less transverse fovea of mesepimeral sulcus and sharply pointed metascutellum with elongate metanotal spine.

MATERIAL EXAMINED: Holotype female: 1. label: Xenomerus, laticeps, Dodd female type; 2. label: I. 5428, Xenomerus, laticeps Dodd, n. s. Wales, also slide.

OTHER MATERIAL EXAMINED: **AUSTRALIA: Qld**. Brisbane Forest Park, 27 25’04”S152 49’48”E, 30.VIII.-4.IX. 1998, N. Power, malaise trap, 1female; 27 25’05”S, 152 50’13”E, 6-13.II.98, 1female; 24-30.I.1998, across creek, 1female; Qld. 700m. Mt. Tamborine N.P. March 3.1984, s.s., L.Masner, 1female; Qld. 30m. Cooloola N.P. March 7.1984,s.s., L.Masner, Rain forest on sands, 2male; Qld, Gordonvale, Goldsborough S.F. 6.IX.1994, M.Schauff, 2male; N. Queensland, Davies Creek, E. of Mareeba, 2.xii.82. Bouček, 2female; **ACT**, Canberra, Black Mtn., 35 16’S, 149 6’E, 22-29.XI.1998, G.Gibson, malaise, 1male; **NSW**, 5km. NE Nerriga, 19.I-4.II.1984, L.Masner, MT, dry sclerophyl Eucalyptus forest, MT, 600m., 1male;NSW, Barrington Tops, SF, 1000m., Feb.11,1984, L. Masner, s.s., 1female;NSW, Royal N.P. 20km. S.Sydney 30m, 5-14.VI.78. S.N.Peck. dry sclerophyl forest edge. Mal.trap, 1male.

Xenomerus madag new species

Figure 258

MALE (HT): Length=0.99 mm. Dark brown, interantennal process, radicle, A1 proximally, legs including coxae, excluding last dark brown tarsomeres, light brown; **FCI**=1.26; **LCI**=1.45; **HW/IOS**=1.57; head less than 1,5 times as wide as mesosoma (**HW/TSL**= 1.31); facial striae extending to frons; frontal patch distinct; frons setae rare, thin; central keel complete; toruli triangle shorter than clypeus height; POL about 1.5 times as long as OOL (**POL/OOL**=1.61); OOL longer LOL (**OOL/LOL**=1.30); hyperoccipital carina absent; vertex entirely reticulate, merging with genal patch; A1 about 3.5 times as long as radicle (**A1/r**=3.66); A3-A11 unibottled; A5 modified; epomial carina absent; cervical pronotal area laterally, lateral pronotal area dorsomedially reticulate; netrion sulcus complete, netrion striation not extending to lateral pronotal area; pronotal suprahumeral sulcus diminishing medially, foveolate; pronotal cervical sulcus foveolate; mesoscutum less than 1.5 times as wide as long (**TSL/ML**=1.33); notaulus short, not reaching transscutal line; mesoscutum with rare, thin setae; mesoscutum sculpture not extending to inter and lateral notaular areas; mesoscutellum about 2.0 times as wide as long (**SW/SL**=2.12); scuto-scutellar sulcus distinctly diminishing medially, 4 times as wide laterally as in the middle; mesoscutellum smooth with rare, long, thin marginal setae; posterior scutellar sulcus not extending onto axillula; sternaulus distinctly separated from anterior row of foveae of mesopleural carina; mesopleural carina almost reduced, marked by a short sulcus emerging from sternaulus; sulcus along metapleural carina not foveolate; metascutellum bluntly triangular, basal striation not extending apically; propodeal lateral carinae inverted V-shaped, shafts straight; propodeal lateral and plical areas with rare, marginal setae; marginal striation not extending medially; posterior propodeal projection indistinct; plica absent; forewing distinctly wider than mesoscutum (**TSL/WW**=0.73); marginal vein more than 3 times as long as stigmal vein (**m/st**=3.63); hind wing less than 1.5 times as wide as marginal ciliae length (**HWW/HWS**=1.27); T1 almost as wide as T1+T2 length (**T1W/T1+T2L**=1.16); T3 almost 1.5 times as wide as long (**T3W/T3L**=1.48), as wide as mesoscutum (**T3W/TSL**=1.0); basal grooves present on T3; lateral patch present, 4 times as long as wide; diameter of posterior patch of T3 equal to width of 2 basal grooves; only lateral patch on T4 present.

FEMALE: unknown

DIAGNOSIS: Most closely related to *X. fulleri*, differs by presence of netrion sulcus and netrion striation not extending onto lateral pronotal area.

ETYMOLOGY: The species name refers to locality of type specimens.

MATERIAL EXAMINED: Holotype male: **MADAGASCAR:** 9.2 km wsw. Befingtotra Res. Anjanahariba Sud, 14 45’S, 49 28’E, 1280m, 13-21.XI.1994, B.L.Fischer, 01155. Paratypes: 3male with same data as holotype. Holotype is deposited in SANC, paratypes in CNCI.

Xenomerus malawi, new species

Figure 246

FEMALE (HT)**:** Length=1.50 mm. Dark brown; head, mesonotum blackish; mandible, interantennal process, radicle, trochanteres, tibiae and tarsi except light brown last tarsomeres yellow; coxae, femora, antenna light brown; **FCI**=1.13; **LCI**=1.70; **HW/IOS**=1.59; head less than 1.5 times as wide as mesosoma (**HW/TSL**= 1.28); facial striae not reaching midlevel of eye along inner orbit, exceeding and partly obscuring frontal patch; frontal patch distinct, not vertically elongated, not reaching eye midlevel; frons setae rare, thin; central keel incomplete, not reaching eye midlevel; toruli triangle shorter than clypeus height; POL about as long as OOL (**POL/OOL**=0.93); OOL more than 1.5 times as long as LOL (**OOL/LOL**=1.66); hyperoccipital carina present, blunt, not extending to inner orbit; vertex reticulate; genal patch present, merging with vertex sculpture; A1 more than 5.0 times as long as radicle (**A1/r**=5.33), nearly equal to clava (**A1/cl**=0.96); epomial carina present, diminishing medially; cervical pronotal area smooth, with scattered setae, setal base pustulate; lateral pronotal area near epomial carina finely coriaceous, above pronotal ventral projection crenulate; netrion sulcus complete; netrional striation not extending onto lateral pronotal area; pronotal suprahumeral and cervical sulci complete, foveolate, pronotal suprahumeral sulcus strongly diminishing medially; mesoscutum less than 1.5 times as wide as long (**TSL/ML**=1.34); notaulus normal, almost reaching transscutal line; reticulate sculpture of mesoscutum extending to lateral and inter notaular areas, more transverse on inter notaular area; mesoscutellum less than 2.0 times as wide as long (**SW/SL**=1.87); scuto-scutellar sulcus slightly diminishing medially, 1.5-2.0 times as wide laterally as in the middle; mesoscutellum crenulate anteriorly, with rare, marginal setae; posterior scutellar sulcus extending onto axillula; sternaulus not separated from anterior row of foveae of mesopleural carina; distance between postacetabular sulcus and anterior row of foveae of mesopleural carina 2-3 times as wide as foveae width of postacetabular sulcus; mesopleural carina complete, with complete rows of foveae; sulcus along metapleural carina foveolate; metascutellum sharply pointed; propodeal lateral carinae inverted Y-shaped, shafts slightly curved outward; propodeal lateral area and plical area obscured by pale, rare setae, marginal striation extending medially; posterior propodeal projection distinct; forewing distinctly wider than mesoscutum (**TSL/WW**=0.83); marginal vein more than 3.5 times as long as stigmal vein (**m/st**=3.46); hind wing about 3.5 times as wide as marginal ciliae length (**HWW/HWS**=2.2); T1 with small hump anteriorly, less than 1.5 times as wide as T1+T2 length (**T1W/T1+T2L**=1.12); T3 less than 1.5 times as wide as long (T3W/T3L=1.26), as wide as mesoscutum (**T3W/TSL**=1.07); costae on T3 exceeding level of apical setae; lateral patch distinct, extending medially almost as wide as long diameter of posterior patch of T3 equal to width of 2-3 basal grooves; posterior T3 without coriaceous sculpture; anterior half of T4 entirely reticulate.

MALE: unknown

DIAGNOSIS: Most closely related to *X. feehani,* differs in anteriorly crenulate mesoscutellum, color of coxae, extension of lateral patch on T3, sculpture of posterior T3.

ETYMOLOGY: named after the type locality.

MATERIAL EXAMINED: Holotype female: **MALAWI**: Mtunthama, 16.II.1983, J.Feehan, FIT. Holotype is deposited in SANC.

Xenomerus melikai new species

Figure 234

FEMALE (HT)**:** Length=1.22 mm. Dark brown; apex of interantennal process, radicle, A1-A6, legs including coxae, excluding light brown last tarsomeres yellow, metasoma light brown; **FCI**=1.12; **LCI**=1.64; **HW/IOS**=1.56; head less than 1.5 times as wide as mesosoma (**HW/TSL**=1.32); facial striae exceeding midlevel of eye, parallel on frons, obscuring frontal patch; frontal patch indistinct; frons setae rare, thin; central keel complete; toruli triangle shorter than clypeus height; POL as long as OOL (**POL/OOL**=1.05); OOL 2 times as long as LOL (**OOL/LOL**=2.0); hyperoccipital carina present, extending to inner orbit; vertex smooth; genal patch absent; A1 more than 7 times as long as radicle (**A1/r**=7.25), about as long as clava (**A1/cl**=1.03); epomial carina present, reaching pronotal suprahumeral sulcus; cervical pronotal area smooth, with scattered setae, setal base pustulate; netrion sulcus absent; netrional striation extending onto lateral pronotal area; pronotal suprahumeral and cervical sulci complete, foveolate; mesoscutum more than 1.5 times as wide as long (**TSL/ML**=1.63); notaulus short, about two times as long as wide; reticulate sculpture of mesoscutum not extending to inter and lateral notaular areas; mesoscutellum 2.0 times as wide as long (**SW/SL**=2.04); scuto-scutellar sulcus slightly diminishing medially, 2 times as wide laterally as in the middle; mesoscutellum smooth, with rare, long marginal setae; posterior scutellar sulcus not extending onto axillula; sternaulus not separated from anterior row of foveae of mesopleural carina; distance between postacetabular sulcus and anterior row of foveae of mesopleural carina equal to foveae width of postacetabular sulcus; mesopleural carina complete, with complete rows of foveae; foveae of mesepimeral sulcus not longer than wide; sulcus along metapleural carina foveolate; metascutellum sharply pointed, spine short; propodeal lateral carinae inverted Y-shaped, shafts distinctly curved outward; propodeal lateral area and plical area obscured by pale, dense setae, setal base pustulate, marginal striation extending medially; posterior propodeal projection indistinct; forewing about as wide as mesoscutum (**TSL/WW**=0.98); marginal vein 3 times as long as stigmal vein (**m/st**=3.11); hind wing less than two times as wide as marginal ciliae length (**HWW/HWS**=1.87); T1, less than 1.5 times as wide as T1+T2 length (**T1W/T1+T2L**=1.35); T3 about 1.5 times as wide as long (T3W/T3L=1.46), as wide as mesoscutum (**T3W/TSL**=0.98); costae on T3 reaching 1/5 of tergum medially; lateral patches distinct, reduced; diameter of posterior patch of T3 nearly equal to width of one basal grooves; lateral patch on T4 present; median patch marked by punctures.

ETYMOLOGY: The species name refers to the Hungarian cynipidologist, George Melika.

MALE: unknown

DIAGNOSIS: Most closely related to *X. falvicornis* differs by shorter radicle, well developed epomial carina, extremely short notaulus, granulose mesoscutum, and short metanotal spine.

MATERIAL EXAMINED: Holotype female: **PAPUA NEW GUINEA:** East New Britain, Bainings Mts, Raunsepna, 30.VI-28VII.1999, C.Mitparingi, malaise trap. Holotype is deposited in SAMA.

Xenomerus melleus, new species

Figures 260, 261, 263, 265, 281

MALE (HT): Length=1.02 mm. honey brown, antenna, excluding yellow radicle, metasoma, except honey-brown petiole, dark brown, mandible yellow, metapectal-propodeal complex light brown; **FCI**=1.42; **LCI**=1.59; **HW/IOS**=1.48; head less than 1,5 times as wide as mesosoma (**HW/TSL**= 1.32); facial striae extending to vertex obscuring frontal patch; frontal patch distinct; frons bare; central keel complete; toruli triangle shorter than clypeus height, not reaching midlevel of eye; POL shorter than OOL (**POL/OOL**=0.75); OOL more than 2.5 times as long as LOL (**OOL/LOL**=2.85); hyperoccipital carina absent; interocellar area transversely crenulate, crenulae radiating from the lateral and posterior margin of lateral ocellus, vertex patch present; genal patch present separated from vertex sculpture; A1 more than 4 times as long as radicle (**A1/r**=4.37), A2-A5 unibottled, A6-A11 dibottled; epomial carina absent; cervical pronotal area finely reticulate, lateral pronotal area reticulate dorsomedially, crenulate ventrolaterally; netrion sulcus complete; pronotal suprahumeral and cervical sulci not foveolate; mesoscutum more than 1.5 times as wide as long (**TSL/ML**=1.65); notaulus reaching transscutal line; mesoscutum with rare, thin setae, sculpture reaching to posterior margin on inter notaular area; mesoscutellum more than 2.0 times as wide as long (**SW/SL**=2.27); scuto-scutellar sulcus slightly diminishing medially, 2 times as wide laterally as in the middle; mesoscutellum finely coriaceous anteriorly, with rare marginal setae; posterior scutellar sulcus not extending onto axillula; sternaulus not separated from anterior row of foveae of mesopleural carina; mesopleural carina incomplete; sulcus along metapleural carina foveolate; metascutellum bluntly triangular, basal striation extending apically; propodeal lateral carinae inverted V-shaped, shafts straight; propodeal lateral and plical areas obscured by pale, rare setae; marginal striation extending medially; posterior propodeal projection distinct; mesoscutum about as wide as fore wing (**TSL/WW**=0.96); marginal vein more than 4 times as long as stigmal vein (**m/st**=3.3); hind wing about 1.5 times as wide as marginal ciliae (**HWW/HWS**=1.53); T1 less than 1.5 times as wide as T1+T2 length (**T1W/T1+T2L**=1.26); T3 as wide as mesoscutum (**T3W/TSL**=0.96), almost 2 times as wide as long (**T3W**/T3L=1.86); costae on T3 reaching 1/3 of tergum submedially; reticulate sculpture extending from lateral patch medially, covering posterior 2/3 of tergum, not reaching posterior margin, obscuring posterior patch; anterior 2/3 of T4 reticulate.

VARIABILITY (n=7): Length=0.88-1.05 mm (m=0.96, SD=0.05); **FCI**=1.30-1.42 (m=1.36, SD=0.04); **LCI**=1.47-1.59 (m=1.52, SD=0.03); **HW/IOS**=1.46-1.53 (m=1.48, SD=0.02); **HW/TSL**=1.28-1.36 (m=1.32, SD=0.02); **POL/OOL**=0.69-0.78 (m=0.74, SD=0.03); **OOL/LOL**=2.52-2.85 (m=2.74, SD=0.12); **A1/r**=4.37-5.16 (m=4.67, SD=0.30); **TSL/ML**=1.57-1.70 (m=1.64, SD=0.04); **SW/SL**==2.05-2.29 (m=2.21, SD=0.09); **TSL/WW**=0.78-0.96 (m=0.87, SD=0.05); **m/st**=3.2-3.5

(m=3.41, SD=0.13); **HWW/HWS**=1.53-1.66 (m=1.62, SD=0.06); **T1W/T1+T2L**=1.19-1.5 (m=1.28, SD=0.1); **T3W/TSL**=0.94-0.96 (m=0.95, SD=0.01).

FEMALE: unknown

DIAGNOSIS: Differs from all other species of *Xenomerus* by dibottled A6. Most closely related to *X. halteratus*, differs by not rugulous upper frons, sculpture of vertex, longer notaulus, incomplete mesopleural carina. Differs from *X. ochraceus* in having facial striae extending to vertex, incomplete mesopleural carina and posteriorly reticulate T3.

ETYMOLOGY: From the latin mellis, meaning honey, referring to the body color.

MATERIAL EXAMINED**:** Holotype male: **AUSTRALIA:** ATC, Canberra, Black Mtn. Jan.27-Feb.7.1984, L.Masner, MT. Paratypes: 2male, with same data as holotype; NSW, Monga State Forest, 24.I-4.II.1984, L. Masner, Dry sclerophyl Eucalyptus forest, MT, 600m, 2male; 19-24.I.1984, 1male; Qld. 630m. Mt. Glorious N. P. Feb.28.1984, s.s., L.Masner, Trop.rain & sclerophyl for. Mixed, s.s., 1male; Qld. Kuranda, 1000m, Feb.21.1984, L.Masner, s.s., Rain forest underground 1male; ACT, Canberra, Black Mt. CSIRO 35 16'S, 149 06'E, 23-30.V.1998. G.A.P.Gibson, YPT 1male; NSW Kosciusco Nat. Park Wilsons Valley, 1490m, Maintenance Depot area, 7-21.II.1993, 36 21'S 148 32'E, open Eucalyptus pauciflora forest, A. Newton, M. Thayer, 3male. Holotype and 5 paratypes are deposited in SAMA; 5 paratypes in CNCI.

Xenomerus noyesi new species

Figures 253, 257

MALE (HT): Length=0.79 mm. Brown, interantennal process, radicle, A1, A2 entirely, A3-A12 apically, legs including coxae excluding hind tibia and hind tarsomeres yellow; **FCI**=1.17; **LCI**=1.43; **HW**/IOS=1.53; head less than 1,5 times as wide as mesosoma (**HW/TSL**= 1.29); facial striae not extending to frons; frontal patch distinct; frons setae rare, thin; central keel absent; toruli triangle opened dorsally, shorter than clypeus height; POL less than two times as long as OOL (**POL/OOL**=1.75); OOL longer than LOL (**OOL/LOL**=1.33); hyperoccipital carina absent; vertex patch present, with diameter equal to lateral ocellus, not reaching lateral ocellus; interocellar area reticulate posteriorly; genal patch present, separated from vertex sculpture; A1 about 5 times as long as radicle (**A1/r**=4.88); A3-A11 unibottled; A5 modified; epomial carina present, diminishing medially; cervical pronotal area smooth medially, reticulate dorsolaterally, above epomial carina; lateral pronotal area reticulate dorsomedially near and above epomial carina; netrion sulcus incomplete, netrion striation extending to lateral pronotal area; pronotal suprahumeral sulcus diminishing medially, not foveolate; pronotal cervical sulcus foveolate; mesoscutum less than 1.5 times as wide as long (**TSL/ML**=1.3); notaulus elongate, exceeding transscutal line; mesoscutum with rare, thin setae; mesoscutum sculpture extending to inter and lateral notaular areas, not reaching posterior margin; mesoscutellum about 1.5 times as wide as long (**SW/SL**=1.66); scuto-scutellar sulcus distinctly diminishing medially, 4 times as wide laterally as in the middle; mesoscutellum

smooth with rare, long, thin setae; posterior scutellar sulcus extending onto axillula; sternaulus distinctly separated from anterior row of foveae of mesopleural carina; distance between postacetabular sulcus and anterior row of foveae of mesopleural carina 2-3 times as long as foveae width of postacetabular sulcus; mesopleural carina incomplete, anterior and posterior rows of foveae diminishing ventrally; sulcus along metapleural carina foveolate; metascutellum unarmed; propodeal lateral carinae inverted V-shaped, shafts straight; propodeal lateral area and plical area bare; marginal striation extending medially; posterior propodeal projection indistinct; forewing wider than mesoscutum (**TSL/WW**=0.84); marginal vein more than 3 times as long as stigmal vein (**m/st**=3.66); hind wing less than 1.5 times as wide as marginal ciliae length (**HWW/HWS**=1.25); T1 almost as wide as T1+T2 length (**T1W/T1+T2L**=1.1); T3 about as wide as mesoscutum (**T3W/TSL**=1.11); basal grooves absent on T3; lateral patch absent; diameter of posterior patch of T3 shorter than width of basal groove on T2; lateral patch on T4 present, median patch absent.

FEMALE: unknown

DIAGNOSIS: Differs from all other species of *Xenomerus* by the combination of smooth T3, extended netrional striation, and well separated and developed sternaulus.

ETYMOLOGY: The species name refers to its collector, John S. Noyes.

MATERIAL EXAMINED**:** Holotype male: **INDONESIA:** Sulawesi Utara, Kotamobagu, Dapau Mooat, 1300m, V.1985. J. S. Noyes Forest, MT. Paratypes: 4male with same data as holotype. Holotype and 2 paratypes are deposited in CNCI; 2 paratypes in BMNH.

Xenomerus ochraceus, new species

Figures 203-205, 209, 212, 262, 264, 284

FEMALE (HT): Length=1.2 mm. Ochre; head, excluding clypeus and interantennal process, clava, metasoma excluding T1 and lateroterga, pronotum medially, mesoscutum and mesoscutellum dark ochre, legs, radicle, base of A1 and interantennal process yellow; **FCI**=1.18; **LCI**=1.86; **HW/IOS**=1.63; head less than 1,5 times as wide as mesosoma (**HW/TSL**= 1.3); facial striae exceeding midlevel of eye along inner orbit, obscuring frontal patch; frontal patch distinct; frons setae dense, setae thin; central keel incomplete; toruli triangle shorter than clypeus height; POL less than 1.5 times as long as OOL (**POL/OOL**=1.25); OOL more than 1.5 times as long as LOL (**OOL/LOL**=1.66); hyperoccipital carina absent; vertex patch present, with diameter equal to lateral ocellus; vertex setae denser behind POL area; genal patch absent; A1 more than 5 times as long as radicle (**A1/r**=5.16), longer than clava (**A1/cl**=1.12); epomial carina absent; cervical pronotal area, with scattered setae and reticulate sculpture along lateral and dorsal margin; lateral pronotal area reticulate medially, with scattered setae, ventrolaterally smooth; netrion sulcus incomplete; pronotal suprahumeral sulcus diminishing medially, foveolate; pronotal cervical sulcus not foveolate; anterior tip of pronotum reduced; mesoscutum more than 1.5 times as wide as long (**TSL/ML**=1.77); notaulus absent; mesoscutum with dense setae; mesoscutum sculpture reaching posterior margin of

mesoscutum; mesoscutellum more than 2.0 times as wide as long (**SW/SL**=2.12); scuto-scutellar sulcus slightly diminishing medially, 1.5 times as wide laterally as in the middle; mesoscutellum punctuate, with dense, scattered setae; posterior scutellar sulcus extending on axillula; sternaulus not separated from anterior row of foveae of mesopleural carina; distance between postacetabular sulcus and anterior row of foveae of mesopleural carina nearly equal to foveae width of postacetabular sulcus; mesopleural carina complete, with complete row of foveae, maximal distance between posterior row of foveae of mesopleural carina and mesepimeral sulcus as long as width of posterior row of foveae of mesopleural carina; sulcus along metapleural carina foveolate; metascutellum bluntly triangular, entirely striated; propodeal lateral carinae S- shaped; propodeal lateral area and plical area obscured by rare setae, entirely striated; posterior propodeal projection distinct, tubercle like; forewing as wide as mesoscutum (**TSL/WW**=1); marginal vein more than 3 times as long as stigmal vein (**m/st**=3.33); hind wing more than 2 times as wide as marginal ciliae length (**HWW/HWS**=2.4); T1 about 1.5 times as wide as T1+T2 length (**T1W/T1+T2L**=1.6); T3 as wide as mesoscutum (**T3W/TSL**=1.05); basal grooves broad; costae not extending from it; lateral patch absent; diameter of posterior patch of T3 nearly equal to width of 3 basal grooves, weakly visible; T3 with dense setae laterally; **apical setae of T3 elongate, (T3L/asT3=2.32);** lateral patch on T4 present, median patch absent.

VARIABILITY (n=23): Length=0.86-1.51 mm (m=1.08, SD=0.17); bicolored: ochre, mesonotum, metasoma, POL area and clava dark brown; ochre only metasoma apically dark brown; ochre, head and mesonotum dark brown; mesoscutellum, metasoma apically and mesonotum anteriorly dark brown; unicolored: ochre or light yellow; **FCI**=1.13-1.23 (m=1.17, SD=0.02); **LCI**=1.63-1.86 (m=1.77, SD=0.06); **HW/IOS**=1.56-1.69 (m=1.63, SD=0.03); **HW/TSL**=1.2-1.44 (m=1.31, SD=0.05); **POL/OOL**=1.25-1.35 (m=1.27, SD=0.03); **OOL/LOL**=1.55-1.77 (m=1.65, SD=0.07); **A1/r**=5-5.75 (m=5.3, SD=0.21); **A1/cl**=1-1.18 (m=1.08, SD=0.06,); **TSL/ML**=1.55-1.76 (m=1.65, SD=0.09); **SW/SL**==1.9-2.27 (m=2.13, SD=0.1); sometimes maximal distance between posterior row of foveae of mesopleural carina and mesepimeral sulcus 2-3 times as wide as posterior row of foveae; **TSL/WW**=0.8-1.12 (m=0.96, SD=0.07); **m/st**=3.26-3.56 (m=3.38, SD=0.08); **HWW/HWS**=1.84-2.66 (m=2.13, SD=0.25); **T1W/T1+T2L**=1.36-1.77 (m=1.62, SD=0.13); **T3W/TSL**=0.96-1.16 (m=1.06, SD=0.053), sometimes costae extending from basal grooves, never exceeding middle of tergum; basal grooves thick; sometimes T4 reticulate medially and laterally, smooth submedially.

MALE (n=9): length=0.9-1.12 (m=0.98, SD=0.11); A1-2 yellow to light brown, A3-A12 light brown to dark brown, metasoma and sometimes mesonotum brown; head wider (**FCI**=1.24-1.33, m=1.29, SD=0.03); **LCI**=1.61-1.77, m=1.69, SD=0.07); **HW/IOS**=1.48-1.59 (m=1.54, SD=0.04); **HW/TSL**=1.29-1.45 (m=1.40, SD=0.05); OOL longer (**POL/OOL**=1-1.16, m=1.08, SD=0.05; **OOL/LOL**=2-2.11, m=2.01, SD=0.04); **A1/r**=3.75-4.12 (m=3.85, SD=0.15); A5 modified; A7-A11 dibottled, with weak constriction in-between; antennomeres with numerous ventral microcilia; **TSL/ML**=1.65-1.77 **(**m=1.71, SD=0.04); notaulus present; **SW/SL**=1.9-2.05 **(**m=1.96, SD=0.06);

TSL/WW=0.77-0.91 (m=0.83, SD=0.05); **m/st**=4-4.5 (m=4.27, SD=0.22); **HWW/HWS**=1.66-1.87 (m=1.8, SD=0.08); metasoma longer (**T1W/T1+T2L**=1.42-1.6, m=1.51, SD=0.06; **T3W/TSL**=0.96-1.03, m=0.98, SD=0.02).

DIAGNOSIS: Shared with *X. guinensis* the incomplete central keel and differs by dense setae on frons, thick basal grooves and short costae on T3, not extending to middle of tergum. Most closely related to *X. yamagishi*, differs by incomplete central keel and thick basal grooves on T3.

ETYMOLOGY: The species name refers to body color.

MATERIAL EXAMINED: Holotype female: **CENTRAL AFRICAN REPUBLIC:** Dzanga-Ndoki Nat.Park, Mabea Bai, 510m, 3°02'N, 16°25'E, 7.V.2001. D.L.Fisher. Paratypes: Prefecture Sangha-Mbaéré, Parc Nationale de Dzangha-Ndoki, 38.6km 173˚ S Lidjombo, 2˚21.60'N 16˚03.20'E, 350m, 26-27.v.2001, S.van Noort, Malaise trap, CAR01-M224, lowland rainforest, 1male; 20-21.v.2001., CAR01-M158, 1female; 22.v.2001., Sweep, CAR01-S230, 1male; 53˚NE Bayanga, 3˚02.01'N 16˚24.57'E, 510m, 2-3.v.2001, Malaise trap, CAR01-M21, Lowland Rainforest, marsh clearing, 1female; Réserve Spéciale de Forét Dense de Dzanga-Shangha, 12.7km 326˚ NW Bayanga, 3˚00.27'N 16˚11.55'E, 420m, 13.v.2001, S.van Noort, Sweep, CAR01-S162, Lowland Rainforest, 1female; 12.v.2001., CAR01-S121, 1male. **REPUBLIC OF SOUTH AFRICA**: Tvl. 900m, Trichardtsdal, W 15 km Malta Forest, XII.1985. W.R.M.Mason 1female; Natal, 75 km, WSW. Eastcourt Cathedral Peaks For.Stn. 7-20.XII.1979. S.& J.Peck, 1380 MT riverside scrub, 2female, 2male; Trans. 15 km E Klaserie Guernsey Farm, 19-31.XII.1985. M.Sanborne, 2female, 1male; Kwazulu-Natal, Cathedral Peak, Nat'l Reserve, Didima, 28˚57.4' 29˚14.4'E, 3-11ii.2005, 1420m, V.Kolyada, YPT, 3female, 1male; Kwazulu-Natal, Pietermaritzburg, Ferncliff Nat'l reserve, 850m, 29˚33.2'S 30˚20.6'E, 6-8.iv.2005, V.Kolyada, YPT, 1male; Kwazulu-Natal, Vernon Crookes, Nat'l Reserve, 30˚17.4'S 30˚36.9'E, 18-20.iii.2005., 250m, V.Kolyada, 2female, 3male; Kwazulu-Natal, Pietermaritzburg Hilton, 11-23.xi.2003, M.Mostowski, MT., 1male; Kwazulu-Natal, Ramsgate Butterfly Sanctuary, 30˚53.3S 30˚20.4'E, 1.xi-2.xii.2004, M.Mostowski, MT., 1male; 9.i-2.ii.2005, 1female; Eastern Cape, E. London, 32˚58.9'S 27˚53.2'E, 24-29.xii.2004, M.Mostovski, malaise trap, 1female; Kwazulu-Natal, Vernon Crookes Nat. Reserve, 30˚17.4'S 30˚36.9E, 18.ii-18.iii.2005., M.Mostovski, malaise trap, 2female, 1male; Kwazulu-Natal, Pietermaritzburg, Cumberland Nat. reserve. 29˚30.8'S 30˚30.3'E, YPT, 21-22.ii.2005, V.Kolyada, 1male. **NIGERIA**: Ibadan, 29.IX.1962. D.C.Eidt, 1female; 5. I. 1962, 1female; Oyo Fiditi, 3.XI.1987. J.S.Noyes 1female; Oyo Ibadan, IITA X.1987. MT J.S.Noyes 1female. **KENYA**: Nairobi environs, 01°2301'S, 36°8513'E, 1656m, V.2002. S.Kimani, YPT 2female; VII. 2002, 1male; Nyanza, Ungoye/ICIPE, 1147m, 12-26.ii.2005., 0˚36.91'S 34˚05.52'E, seasonally swampy woodland next to grassland, 1male; **GUINEA**: Mt.Nimba, 514-740m, 7°41'to 42'N, 8°23'W, XII.1990.-III.1991. L.Leblanc, FIT rainfor, 1female; 7°41'N 8°23'W XII.1990.-III.1991, 1female. **IVORY COAST**: Bouaké, XII.1980. P.Cochereau, 1female; Bouaké, pantly 1.X.1981, 1female; **RWANDA**: Nyungwe For 2°46'10"S, 29°21'9"E, 24-26.VIII.1993.PAN FIT MAL prim.rainfor. Luc Leblanc, 1female. **CAMEROUN**: Koemvon, IX-X.1980. D.Jackson, 3female; IV-V.1980, 1female.

22. **UGANDA:** Entebbe, Oct.-Nov. 1972. MT, 1female; Nkoemvon, VII-VIII.1980, Mrs.D.Jackson, 1male. **MALI:** Yanfolia, VIII-IX.1986. J.Durham, MT, 1male. **TANZANIA**: Morogoro, Sokoine Univ. 5-10.VIII.1994. J.LaSalle, 1male.

Other material examined: **INDONESIA**: Sumatra, Aceh Gunung Leuser Nat.Park, Ketambe Res.Sta. 1-28.Feb.1990. per. DC.Darling, IIS 900011, MT, 1female; 900013, 1male; 3°41'N, 97°39'E, 350m, 1-30.X.1989, 6male; 400m, III.1990; 1male; I.1990, 1male; W.Kalimantan Gunung Palung Nat.Pk. 15.Jun.-15.Aug. 1991. Darling Rosichon Sutrisno.IIS 910122, 1female. **VIETNAM:** Nghé An W.of ConCuong, Khe Mai for.camp, 18°56'N, 104°49'E, 26-30.X.1994. D.Currie, meadow, 1male. **MALASIA (MALAYSIA):** Sabah Danum Valley, 18.XII.1986.-18.I.1987. M.Still, 1female. **MADAGASCAR:** Tamatave Perinet, 27.iv.-3.v.1983, 3female. **MALAWI**: Chitipa District, Jembya Reserve, 18 km SSE, Chisenga, 10°08'S 33°27'E 1870m 11-20.XII.1988. J.Rawlins, S.Thompson, 5female; 5-10.XII.1988, 1female. **THAILAND**: Suphanburi, Khao Yai Nat. Pk., Haew Narok Waterfall, 550m, 2.vii.90. Heraty, H112, rainforest. Holotype deposited in SANC. 5 paratypes are deposited in SAMC, 5 paratypes in BMNH, 5 paratypes in NMSA, 38 in CNCI.

COMMENTS: *X. ochraceus* is one of the most widely distributed and most variable *Xenomerus* species from South Africa to Indonesia. The only difference between *X. yamagishii* is the incomplete central keel width of basal grooves and fine differences in POL/OOL. All other variabilities, including number of ventral microcilia on male antennomeres, are overlapping between the two species. It might be that these diagnostic characters are interspecific in variability and *X. yamagishii* is only a subspecies of *X. ochraceus*. Members of ochraceus group are the only *Xenomerus* species where notaulus absent in female specimens, but present in males. This sexual dimorphism is very common in other Teleasinae (Kononova & Kozlov 2001). The weak constriction of male antennomeres, elongated ventral microcilia and separated acrosternal calyx suggest that *ochraceus* species group might be an intermediate stage between *Trimorus* and *Xenomerus*.

Xenomerus orientalis, new species

Figures 228, 230, 267

FEMALE (HT)**:** Length=1.30 mm. Black, A8-A12, lateral pronotal area, mesopleuron, metapectus and metasoma dark brown; mandible, interantennal process, radicle, A1-A7 and legs, including coxae yellow, A5 and A6 lighter; **FCI**=1.17; **LCI**=1.73; **HW/IOS**=1.68; head less than 1,5 times as wide as mesosoma (**HW/TSL**= 1.39); facial striae exceeding midlevel of eye, curving inward dorsally, obscuring frontal patch; frontal patch indistinct; frons setae dense, thin; central keel complete; toruli triangle shorter than clypeus height; POL about than 1.5 times as long as OOL (**POL/OOL**=1.42); OOL about 1.5 times as long as LOL (**OOL/LOL**=1.46); hyperoccipital carina present, sharp, extending to inner orbit; vertex without sculpture; genal patch present; A1 about 3.0 times as long as radicle (**A1/r**=3.15), as long as clava (**A1/cl**=1); epomial carina present, almost reaching pronotal suprahumeral sulcus; cervical pronotal area smooth, with scattered setae; lateral pronotal area with

transverse crenulae, reticulate dorsally; netrion sulcus complete; netrional striation not extending onto lateral pronotal area; pronotal suprahumeral sulcus diminishing medially, pronotal cervical sulcus complete, both sulci foveolate; mesoscutum more than 1.5 times as wide as long (**TSL/ML**=1.64); notaulus reaching transscutal line; mesoscutum coriaceous, with dense thin setae, setal base pustulate, sculpture extending to lateral and inter notaular area, not reaching posterior margin of mesoscutum; mesoscutellum two times as wide as long (**SW/SL**=2.0); scutoscutellar sulcus slightly diminishing, two times as wide laterally as in the middle; mesoscutellum anteriorly rugulous, with rare, marginal setae; posterior scutellar sulcus extending onto axillula; sternaulus not separated from anterior row of foveae of mesopleural carina, distance between postacetabular sulcus and anterior row of foveae of mesopleural carina as wide as foveae width of postacetabular sulcus; mesopleural carina complete with complete rows of foveae, posterior row of foveae of mesopleural carina almost merging with foveae of mesepimeral sulcus; sulcus along metapleural carina foveolate; epicoxal and lower part of metapleural sulci almost merged; metascutellum sharply pointed; propodeal lateral carinae inverted Y-shaped, shafts slightly curved outward; propodeal lateral area and plical area obscured by pale, dense setae, marginal striation extending medially; plica absent; posterior propodeal projection distinct, tubercle like; mesoscutum as wide as fore wing (**TSL/WW**=0.94); marginal vein 3 times as long as stigmal vein (**m/st**=3.08); hind wing less than 2.5 times as wide as marginal ciliae length (**HWW/HWS**=2.40); T1 less than 2 times as wide as T1+T2 length (**T1W/T1+T2L**=1.70); T3 about as wide as mesoscutum (**T3W/TSL**=1.08), costae on T3 extending almost to apex of tergum submedially, reaching 8/9 part of tergum, laterally and medially costae not emerging from basal grooves; lateral patch distinct; diameter of posterior patch of T3 equal to width of one basal groove; Anterior half of T4 reticulate.

VARIABILITY (n=15): Length=1.0-1.30 mm (m=1.11, SD=0.07); sometimes coxae and antenna darker, mesopleuron and metapectus reddish; **FCI**=1.10-1.17 (m=1.13, SD=0.02); **LCI**=1.72-1.92 (m=1.81, SD=0.06); **HW/IOS**=1.61-1.71 (m=1.62, SD=0.01); **HW/TSL**=1.37-1.43 (m=1.40, SD=0.02); facial striae sometimes elongated, exceeding dorsally to vertex, medially to central keel; **POL/OOL**=1.38-1.77 (m=1.46, SD=0.10); **OOL/LOL**=1.05-1.63 (m=1.47, SD=0.13); vertex sometimes with two finely coriaceous patches behind OOL area, never extending anteriorly to frons; **A1/r**=3.15-3.60 (m=3.43, SD=0.2); **A1/cl**=0.94-1.04 (m=0.98, SD=0.03); **TSL/ML**=1.62-1.76 (m=1.70, SD=0.04); **SW/SL**=2.0-2.10 (m=2.04, SD=0.04); sometimes distance between postacetabular carina and anterior row of foveae of mesopleural carina larger, two or three times as wide as foveae width of postacetabular sulcus; posterior row of foveae of mesopleural carina and mesepimeral sulcus sometimes distinctly separated; in smaller specimens metanotal spine reduced, marked by a tubercle in the middle of metascutellum; sometimes posterior propodeal projection distinct, well developed; **TSL/WW**=0.84-1.09 (m=0.97, SD=0.06); **m/st**=3.0-3.3 (m=3.21, SD=0.07); **HWW/HWS**=2.30-2.50 (m=2.35, SD=0.07); **T1W/T1+T2L**=1.7-1.88 (m=1.77, SD=0.07); **T3W/TSL**=0.97-1.11 (m=1.03, SD=0.04); sometimes costae shortened ,not reaching 4/5 of tergum.

MALE (n=1): **HW/IOS**=1.49; **A1/r**=3; A4, A5 modified; A7-A11 dibottled; **SW/SL**=1.95; **TSL/WW**=0.75; **m/st**=4; **HWW/HWS**=1.76.

DIAGNOSIS: Most closely related to *X. paraorientalis*, differs by the more extended and dorsally curved facial striae, **POL/OOL**, brown A2-A4 and the sculpture of T3 extended hyperoccipital carina, vertex sculpture not extending anteriorly to frons and anteriorly rugulous mesoscutellum.

ETYMOLOGY: the name is refers to the wide distribution of the species in the Oriental region.

MATERIAL EXAMINED: Holotype female: **TAIWAN**: Kenting, 1-5.V.1991. YPT, C.K.Starr. Paratypes: Taoyuan, Hsien, E. of Bailing. 800m, 25.V.90 J.Heraty, H070, cloud forest, 1female; Wushe, 22.V.1983. 1150m, H.Townes, flight trap, 1female. **INDONESIA**: Sumatra, Aceh Gunung Leuser N. P., Ketambe Res. Sta. 3 41'N, 97 39'E, 400m, III.1990, D.C.Darling, MT, 1female; Sumatra, Utara Perampar, Tanah Karo, 7.VIII-18.IX.88, B.Stride, 1female. **MALAYSIA**: Sabah, Danum Valley, MT, 18.XII.1986-18.I.1987, M.Still, 2female; Cameroun Highl Ringlet Pahang, 20.VII.1984, T.S.Bellows, 1male. **THAILAND**: CH. Mai, Amphur mae, 250m, 15 42'N, 98 49'E, 1-31.I.1998, MT, Roy Snelling, 1female; Chantaburi Soi Dao Forest Insect Centre, 13˚0'9"N.102˚17'7"E, 197m, 16.i.2005, M.Sharkey, 1female. **VIETNAM**: Tuyen Quang prov. 300m, NaHang Reserve, 20-24.V.1997, FIT, S.B.Peck, 97-12, 1female; Cao Bang, Ba Be, Natl. Park, on steep slope across from dorm annex, 16-23.May.1995. B.Hubley & J.Swann, ROM956056, Malaise trap head, fine mesh, 2 growth, light trap, 1female; Nghé An, ca. 25km SW of Con Culong, Khe Moi River Forestry Camp., 6.Jun.1995, B.Hubley, ROM 956170, small stream, 100m upriver of camp, tropical forest edge, 18 56'N, 104 49'E, 308m, 1female.

Other material examined: **TAIWAN**: Pintung Kenting Nat. Park, 17-23.V.1991, PT, C.K.Starr, 1female; Kenting, 1-5.V.1991, YPT, C.K.Starr, 1female; Orchid Is. (Botel Tobago), 5-9.VII.1991, C.K.Starr, PT, 1female. **JAPAN**: Aichi Pref. Douzuki, Obara, 1-7.VII.1990, K. Yamagishi, PT, 1female; MT., Hiko, VIII-IX.89, Sharkey, 1male. **VIETNAM**: Ha Tinh Huong Son, 300m, 18 22'N, 105 13'E, 20.IV-1.V.1998, L.Herman, MT, 1male. **INDIA**: T. Nadu, Maruthamalai, 27.ix.1979, J.S.Noyes, 1female. Holotype and paratypes are deposited in CNCI.

COMMENTS: Most widely distributed and most variable *Xenomerus* species in the Oriental region. Many of the salient characters of *X. orientalis* (anterior rugulous sculpture on mesoscutellum, facial striae and sculpture of metasoma) are unfortunately highly reduced in smaller species. The relative high variability in POL/LOL also could be resulted by allometric change. Some minute *Xenomerus orientalis* specimens were reared from the eggs of Dromiinae, however, many of the diagnostic characters are reduced on the three male and one female specimens, therefore we do not involved them into paratype series. To decide, whether the above mentioned variability are inter- or intraspecific, requires examination of more specimens.

Xenomerus paraorientalis, new species

Figures 227, 229

FEMALE (HT)**:** Length=1.21 mm. Dark brown, interantennal process, radicle, A2 apically, A3-A6, legs, excluding brown coxae and last tarsomeres yellow, mandible light brown.

FCI=1.12; **LCI**=1.78; **HW/IOS**=1.55; head less than 1,5 times as wide as mesosoma (**HW/TSL**= 1.24); facial striae exceeding midlevel of eye, straight, not curved inward dorsally, exceeding frontal patch, frontal patch indistinct; frons setae rare, thin; central keel complete; toruli triangle shorter than clypeus height; POL more than two times as long as OOL (**POL/OOL**=2.14); OOL equal LOL (**OOL/LOL**=1.0); hyperoccipital carina present, blunt, not extending to inner orbit; reticulate sculpture of vertex slightly extending to frons and interocellar area; genal patch present, separated from vertex sculpture; A1 about 3.5 times as long as radicle (**A1/r**=3.43), slightly shorter than clava (**A1/cl**=0.91); epomial carina present, almost reaching pronotal suprahumeral sulcus; cervical pronotal area smooth, with scattered setae; lateral pronotal area with transverse crenulae, reticulate above epomial carina; netrion sulcus absent; netrional striation slightly extending onto lateral pronotal area ventrally; pronotal suprahumeral sulcus diminishing medially, pronotal cervical sulcus complete, both sulci foveolate; mesoscutum more than 1.5 times as wide as long (**TSL/ML**=1.64); notaulus reaching transscutal line; mesoscutum coriaceous, with dense thin setae, setal base pustulate, reticulate sculpture extending to lateral and inter notaular area, not reaching posterior margin of mesoscutum; mesoscutellum about two times as wide as long (**SW/SL**=2.18); scutoscutellar sulcus distinctly diminishing medially, 3-4 times as wide laterally as in the middle; mesoscutellum smooth, with rare, long marginal setae; posterior scutellar sulcus extending onto axillula; sternaulus not separated from anterior row of foveae of mesopleural carina, distance between postacetabular sulcus and anterior row of foveae of mesopleural carina two times as wide as foveae width of postacetabular sulcus; mesopleural carina complete with complete rows of foveae; posterior row of foveae of mesopleural carina and mesepimeral sulcus distinctly separated; sulcus along metapleural carina foveolate; epicoxal and lower part of metapleural sulci distinctly separated; metascutellum sharply pointed; propodeal lateral carinae inverted Y-shaped, shafts straight; propodeal lateral area and plical area obscured by pale, dense setae, marginal striation extending medially; plica absent; posterior propodeal projection distinct, well developed; mesoscutum about as wide as fore wing (**TSL/WW**=1.19); marginal vein 4 times as long as stigmal vein (**m/st**=3.36); hind wing about than 2 times as wide as marginal ciliae length (**HWW/HWS**=1.94); T1 about 2 times as wide as T1+T2 length (**T1W/T1+T2L**=1.92); T3 about as wide as mesoscutum (**T3W/TSL**=0.91), costae on T3 extending almost to posterior margin of tergum submedially, reaching 8/9 part of tergum, laterally and medially costae exceeding middle of tergum; lateral patch distinct; diameter of posterior patch of T3 equal to width of one basal groove; anterior half of T4 reticulate.

VARIABILITY (n=2): Length=0.92-1.21 mm. **HW/IOS**=1.46-1.55; **HW/TSL**=1.24-1.30; **POL/OOL**=2.14-2.25; **OOL/LOL**=0.98-1.0; **A1/cl**=0.86-0.91; **TSL/ML**=1.57-1.64; **SW/SL**==2.05-2.18.

MALE: **FCI**=1.29; **LCI**=1.96; **HW/TSL**=1.37; **POL/OOL**=2.0; **OOL/LOL**=1.16; **A1/r**=2.91; A5 modified; A7-A11 unibottled; **TSL/WW**=0.86; **m/st**=2.8; **HWW/HWS**=1.75; **T1W/T1+T2L**=1.66.

DIAGNOSIS: Most closely related to *X. orientalis*, differs by the less extended and straight facial striae, **POL:OOL** ratio, yellow A3-A6, sculpture of T3, not extended hyperoccipital carina and anteriorly extended reticulate sculpture of vertex and anteriorly smooth mesoscutellum.

ETYMOLOGY: the name is refers its similarity to *X. orientalis*.

MATERIAL EXAMINED: Holotype female: **THAILAND**: 400m, Uthai Thani Dist. Khao Nang Rum, May.1986, MT, M.G.Allen.

Paratypes: 2female with same data as holotype; **BRUNEI**: Tembureng, 16-22.II.1982, M.C.Day, MT, 1male. Holotype and paratypes are deposited in CNCI.

COMMENTS: Whether these species is conspecific with the highly variable *X. orientalis* need examination of more specimens.

Xenomerus rugifrons, new species

Figures 214, 216, 218, 220

FEMALE (HT): Length=1.52 mm. Dark brown; interantennal process, radicle, A1, A2, mandible, legs, excluding brown coxae, yellow; **FCI**=1.14; **LCI**=2.0; **HW/IOS**=1.60; head less than 1,5 times as wide as mesosoma (**HW/TSL**= 1.33); facial striae extending to vertex, obscuring frontal patch; frons setae dense, setae thin, setal base pustulate, median smooth area above interantennal process as wide as clypeus width; frons above median smooth area rugulous; central keel complete; toruli triangle longer than clypeus height, exceeding eye midlevel; POL shorter than OOL (**POL/OOL**=0.80); OOL more than two times as long as LOL (**OOL/LOL**=2.27); hyperoccipital carina present, blunt, not extending to inner orbit; vertex patch present, with diameter two times as large as lateral ocellus; vertex setae denser behind POL area, setal base pustulate; genal patch absent; A1 less than 3.0 times as long as radicle (**A1/r**=2.79), about as long as clava (**A1/cl**=0.98); epomial carina absent; cervical pronotal area smooth, with scattered setae; lateral pronotal area transversely striated; netrion sulcus complete, netrional striation extending and obscuring almost entirely lateral pronotal area; pronotal suprahumeral sulcus slightly diminishing medially, complete, foveolate; pronotal cervical sulcus not foveolate; mesoscutum more than 1.5 times as wide as long (**TSL/ML**=1.63); notaulus elongate, almost reaching anterior margin of mesoscutum; mesoscutum with dense thin setae, sculpture extending to posterior margin; mesoscutellum more than 2.0 times as wide as long (**SW/SL**=2.16); scuto-scutellar sulcus 2 times as wide laterally as in the middle; mesoscutellum smooth, with dense setae, setal base pustulate; trans-axillar carina separated from axillular carina; posterior scutellar sulcus extending onto axillula; sternaulus not separated from anterior row of foveae of mesopleural carina; distance between postacetabular sulcus and anterior row of foveae of mesopleural carina nearly equal to foveae width of postacetabular sulcus; mesopleural carina complete, with complete rows of foveae, maximal distance between posterior row of foveae of mesopleural carina and mesepimeral sulcus half as long as width

of posterior row of foveae of mesopleural carina, foveae merging in lower half of mesopleural depression; epicoxal and lower part of metapleural sulci merged; sulcus along metapleural carina foveolate; metascutellum sharply pointed; propodeal lateral carinae inverted V-shaped, shafts slightly curved inward; propodeal lateral area and plical area obscured by pale, dense setae, setal base pustulate; marginal striation extending medially; posterior propodeal projection distinct; forewing as wide as mesoscutum (**TSL/WW**=1.05); marginal vein more than 3 times as long as stigmal vein (**m/st**=3.66); hind wing more than 2.5 times as wide as marginal ciliae length (**HWW/HWS**=2.62); T1 less than 2 times as wide as T1+T2 length (**T1W/T1+T2L**=1.72); T3 as wide as mesoscutum (**T3W/TSL**=1.0), costae on T3 reaching almost the apex of tergum; lateral patches indistinct; lateral part of T3 obscured by dense setae extending ¼ width of tergum, setal base pustulate; diameter of posterior patch of T3 nearly equal to width of two basal grooves; lateral and median patches on T4 present, not fused.

VARIABILITY (n=3): Length=1.19-1.52 mm (m=1.35, SD=0.23); smaller specimens body lighter; **FCI**=1.14-1.16 (m=1.15, SD=0.01); **LCI**=1.91-2.0 (m=1.95, SD=0.05); **HW/IOS**=1.56-1.60 (m=1.58, SD=0.02); **HW/TSL**=1.33-1.34 (m=1.33, SD=0.006); **POL/OOL**=0.72-0.80 (m=0.76, SD=0.05); **OOL/LOL**=2.27-2.40 (m=2.35, SD=0.12); **A1/r**=2.7-2.79 (m=2.74, SD=0.06); **A1/cl**=0.91-0.98 (m=0.95, SD=0.04); **TSL/ML**=1.63-1.66 (m=1.65, SD=0.02); **SW/SL**==2.08-2.16 (m=2.12, SD=0.06); **TSL/WW**=1; **m/st**=3.66; **HWW/HWS**=2.5-2.62 (m=2.56, SD=0.08); **T1W/T1+T2L**=1.72-1.73 (m=1.72, SD=0.007); **T3W/TSL**=1-1.11 (m=1.05, SD=0.08).

MALE: unknown

DIAGNOSIS: Differs from all other species of *comatus group* by elongate toruli triangle, dorsally rugulous frons and not foveolate cervical sulcus. Most closely related to *X. halteratus*, differs in transversely striated lateral pronotal area, foveolate pronotal suprahumeral sulcus, well developed wings and T3 without reticulate sculpture posteriorly.

ETYMOLOGY: The species name refers to rugulous sculpture of frons.

MATERIAL EXAMINED: Holotype female: **MALAYSIA:** Pasoh Forest Res. Negri S. VII.6.76. for. Gap P.&M.Becker. Paratypes: Sabah, Danum Valley, 18.XII.-18.I.1987. M.Still, MT, 1female. INDONESIA: E. Kalimantan 38 km N.Balikpapan, Samboja I. DC Darling, Rosichon U., Sutrisno 1-30 JUN 1992. IIS920209; 1female. Holotype and paratypes are deposited in CNCI.

Xenomerus scutellatus, new species

Figure 233

FEMALE (HT)**:** Length=1.56 mm. Black, legs excluding brown coxae and last tarsomeres yellow, interantennal process, radicle, A1-A6, mandible, brown, clava dark brown; **FCI**=1.16; **LCI**=1.64; **HW/IOS**=1.66; head less than 1.5 times as wide as mesosoma (**HW/TSL**= 1.40); facial striae reaching midlevel of eye along inner orbit, exceeding frontal patch; frontal patch distinct, vertically elongated, reaching eye midlevel; frons setae rare, thin; central keel complete; toruli triangle shorter

than clypeus height; POL less than 1.5 times as long as OOL (**POL/OOL**=1.26); OOL more than 1.5 times as long as LOL (**OOL/LOL**=1.72); hyperoccipital carina absent; vertex reticulate; genal patch present, not merging with vertex sculpture; A1 more than 5.0 times as long as radicle (**A1/r**=5.5), shorter than clava (**A1/cl**=0.88); epomial carina present, diminishing medially; cervical pronotal area smooth, with scattered setae; lateral pronotal area near epomial carina reticulate with few crenulae above pronotal ventral projection; netrion sulcus complete; netrional striation not extending onto lateral pronotal area; pronotal suprahumeral and cervical sulci complete, foveolate; mesoscutum almost 1.5 times as wide as long (**TSL/ML**=1.44); almost reaching transscutal line; reticulate sculpture of mesoscutum extending to lateral and inter notaular areas, not reaching posterior margin; mesoscutellum about 2.0 times as wide as long (**SW/SL**=1.89); scuto-scutellar sulcus slightly diminishing medially, 2 times as wide laterally as in the middle; mesoscutellum anteriorly rugulous, with rare, scattered setae; posterior scutellar sulcus extending onto axillula; sternaulus separated from anterior row of foveae of mesopleural carina, reduced; distance between postacetabular sulcus and anterior row of foveae of mesopleural carina 3-4 times as wide as foveae width of postacetabular sulcus; mesopleural carina complete, with complete rows of foveae; foveae of upper part of metapleural sulcus 4-5 times as wide as foveae along metapleural carina; metascutellum sharply pointed; propodeal lateral carinae inverted Y-shaped, shafts slightly curved outward; propodeal lateral area and plical area obscured by pale, rare setae, marginal striation extending medially; posterior propodeal projection distinct; forewing wider than mesoscutum (**TSL/WW**=0.83); marginal vein about 3.5 times as long as stigmal vein (**m/st**=3.46); hind wing 3 times as wide as marginal ciliae length (**HWW/HWS**=3.0); T1 concave dorsally, less than 1.5 times as wide as T1+T2 length (**T1W/T1+T2L**=1.37); T3 less than 1.5 times as wide as long (T3W/T3L=1.41), as wide as mesoscutum (**T3W/TSL**=1.13); costae on T3 exceeding level of apical setae; lateral patch distinct, 4 times as long as wide; diameter of posterior patch of T3 nearly equal to width of one basal groove; posterior T3 smooth; anterior 1/3 T4 reticulate, with a median narrow smooth area.

VARIABILITY (n=4): Length=1.56-1.63 mm (m=1.59, SD=0.01); **FCI**=1.12-1.16 (m=1.14, SD=0.02); **LCI**=1.56-1.64 (m=1.60, SD=0.05); **HW/IOS**=1.66-1.67, m=1.66, SD=0.00); **HW/TSL**=1.33-1.4 (m=1.36, SD=0.04); **POL/OOL**=1.23-1.26 (m=1.25, SD=0.01); **OOL/LOL**=1.72-1.75 (m=1.73, SD=0.01); **A1/r**=5.23-5.50 (m=5.36, SD=0.19); **A1/cl**=0.88-0.89 (m=0.88, SD=0.01); **TSL/ML**=1.44-1.45 (m=1.44, SD=0.00); **SW/SL**==1.88-1.89 (m=1.89, SD=0.00); **TSL/WW**=0.83-0.85 (m=0.84, SD=0.01); **m/st**=3.66-3.71 (m=3.68, SD=0.03); **HWW/HWS**=3-3.06 (m=3.01, SD=0.04); **T1W/T1+T2L**=1.37-1.40 (m=1.38, SD=0.04); **T3W/T3L**=1.33-1.41 (m=1.37, SD=0.05); **T3W/TSL**=1.13-1.21 (m=1.17, SD=0.05)

MALE: unknown

DIAGNOSIS: Most closely related to *X. kalocsai*, differs by anteriorly rugulous mesoscutellum.

ETYMOLOGY: named after the unique sculpture of mesoscutellum.

MATERIAL EXAMINED: Holotype female: **UGANDA**: District Masindi, Budongo Forest n. Sonso 1 45'N, 31 35' E, 11-20. Th. Wagner leg. VII.95. Paratypes: 2female, with same data as holotype. Other material: 1female, with same data as holotype (on slide). Holotype is deposited in SANC; paratypes in CNCI.

Xenomerus spinosus, new species

Figures 195, 198, 200, 201

FEMALE (HT)**:** Length=1.31 mm. Dark brown, interantennal process, radicle, A1-A7, mandible, tegula and legs including coxae yellow, A8-A12 light brown; **FCI**=1.20; **LCI**=1.73; **HW/IOS**=1.85; IOS shortest below eye midlevel; head about 1,5 times as wide as mesosoma (**HW/TSL**= 1.45); facial striae reaching vertex along inner orbit, obscuring frontal patch; frontal patch indistinct; frons setae dense, thin; central keel complete; toruli triangle shorter than clypeus height; POL as long as OOL (**POL/OOL**=1.0); OOL two times as long as LOL (**OOL/LOL**=2.0); hyperoccipital carina present, blunt, not extending to inner orbit; vertex patch present; genal patch absent; A1 2.5 times as long as radicle (**A1/r**=2.50), shorter than clava (**A1/cl**=0.86); A4 distinctly longer A3; epomial carina present, almost reaching pronotal suprahumeral sulcus; cervical pronotal area smooth, with scattered setae, setal base pustulate; lateral pronotal area with transverse crenulae; netrion sulcus complete; netrional striation not extending onto lateral pronotal area; pronotal suprahumeral and cervical sulci complete, foveolate; mesoscutum 1.5 times as wide as long (**TSL/ML**=1.52); notaulus exceeding transscutal line; mesoscutum with dense, thin setae, setal base pustulate, reticulate sculpture extending to lateral and inter notaular areas, not reaching posterior margin of mesoscutum; mesoscutellum two times as wide as long (**SW/SL**=2.08); scutoscutellar sulcus slightly diminishing medially, less than 1.5 times as wide laterally as in the middle; mesoscutellum smooth, with a median spine and dense, long, thin setae; posterior scutellar sulcus not extending onto axillula; sternaulus not separated from anterior row of foveae of mesopleural carina, distance between postacetabular sulcus and anterior row of foveae of mesopleural carina nearly as wide as foveae width of postacetabular sulcus; mesopleural carina complete with complete rows of foveae, foveae of mesepimeral sulcus 4 times as wide as posterior row of fovea of mesopleural carina, distance between posterior row of foveae and mesopleural sulcus less than foveae width of mesepimeral sulcus; sulcus along metapleural carina foveolate; metapleural epicoxal and lower part of metapleural sulci not merged; metascutellum sharply pointed; propodeal lateral carinae inverted Y-shaped, shafts straight; propodeal lateral area and plical areas obscured by thin, dense setae, marginal striation extending medially; posterior propodeal projection distinct, well developed; fore wing wider mesoscutum (**TSL/WW**=0.76); marginal vein elongate, almost 5 times as long as stigmal vein (**m/st**=4.7); hind wing about 2.5 times as wide as marginal ciliae length (**HWW/HWS**=2.46); T1 less than 1.5 times as wide as T1+T2 length (**T1W/T1+T2L**=1.45); T3 about as wide as mesoscutum (**T3W/TSL**=1.04), costae on T3 graduating posteriorly into longitudinally rugoso-punctate sculpture, reaching almost the apex of tergum; lateral patches distinct, circular in

shape; diameter of posterior patch of T3 equal to width of one basal groove; anterior half of T4 reticulate.

DIAGNOSIS: Most similar to *X. armatus*, distinguished from it by shorter IOS located below eye midlevel, larger eyes, longer head, clava and radicle, POL/OOL, hyperoccipital carina not extending to inner orbit, vertex sculpture slightly extending to frons between lateral ocellus and inner orbit, absence of median keel extending from anterior margin of mesoscutellum to median spine, presence of netrion sulcus, A4 distinctly longer than A3, longer marginal vein and more elongated metasoma.

ETYMOLOGY: the name refers to spine on mesoscutellum

MATERIAL EXAMINED: Holotype female: **TAIWAN**: Mushe, 1150m V.10.83. Henry Townes. Holotype and paratype(s) are deposited in CNCI.

Xenomerus vanharteni new species

Figures 184, 185

FEMALE (HT)**:** Length=0.62 mm. brown; radicle, trochanteres and tarsomeres, except last brown tarsomere lighter; **FCI**=1.13; **LCI**=1.6; **HW/IOS**=1.51; head less than 1.5 times as wide as mesosoma (**HW/TSL**= 1.35); facial striae not exceeding midlevel of eye, exceeding and obscuring frontal patch; frontal patch distinct; frons setae rare, thin; central keel complete; POL about 3 times as long as OOL (POL/OOL=3.16); OOL shorter than LOL (**OOL/LOL**=0.66); hyperoccipital carina present, keel like, extending to inner orbit, vertex smooth, genal patch absent; A1 2.5 times as long as radicle (**A1/r**=2.50), as long as clava (**A1/cl**=1.08); epomial carina absent, cervical pronotal area smooth, bare; netrion absent, lateral pronotal area with few crenulae above pronotal ventral projection; pronotal suprahumeral and cervical sulci not foveolate; mesoscutum less than 1.5 times as wide as long (**TSL/ML**=1.23); notaulus absent, mesoscutum smooth; mesoscutellum less than 2.5 times as wide as long (**SW/SL**=2.34); scuto-scutellar sulcus almost as wide medially as laterally; mesoscutellum smooth, with rare setae; posterior scutellar sulcus not extending onto axillula; meso- and metapectus except foveolate mesepimeral sulcus, without any foveae; mesopleural carina incomplete; metapleural sulcus reduced to metapleural pit; metascutellum foveolate, metanotal spine absent; propodeal lateral carinae widely separated, forking, plica present, propodeal striation absent; plical area with rare setae, posterior propodeal projection absent; mesoscutum about as wide as fore wing (**TSL/WW**=0.92); marginal vein less than 3 times as long as stigmal vein (**m/st**=3.33); hind wing more than 1.5 times as wide as marginal ciliae length (**HWW/HWS**=1.65); T1 as wide as T1+T2 length (**T1W/T1+T2L**=1.01); T3 less than 1.5 times as wide as long (**T3W/T3L**=1.36), about as wide as mesoscutum (**T3W/TSL**=0.91); T3 smooth, lateral and posterior patches absent; T4 smooth.

MALE: A2-A11 unibottled, A5 modified.

DIAGNOSIS: differs from all other *Xenomerus* by sharp, extended hyperoccipital carina extending to inner orbit, absence of notaulus, and structure of propodeum.

MATERIAL EXAMINED: Holotype female: **YEMEN**: Ar Rujum, 15.1-09.IV.2001/5630, A.van Harten, MT.; Paratypes: 2female, with same data as Holotype; 16.X.00-15.I.01/5471, A.van Harten, MT., 1male. Other material: 1female with the same data as holotype (on slide). Holotype and paratypes are deposited in CNCI.

Notes: Most of the diagnostic characters of Xenomerus are highly reduced, however, the bottle shaped male antennomeres with erect, long bristles and the number of palpomeres (3:1) makes it evident, that *X. vanharteni* belongs to *Xenomerus.*

Xenomerus varipes Dodd, 1914

Figures 237, 239, 170, 172

Xenomerus varipes Dodd, 1914: 83. Original description. Kieffer, 1926: 174, 175 (description, keyed); Dodd, 1930: 89 (description, keyed).

FEMALE (n=10)**:** Length=0.89-1.62 mm (m=1.29, SD=0.27). Black; metasoma dark brown to light brown, sometimes with darker apex, apex of interantennal process, radicle, A1-A6, mandibles, legs excluding last light brown tarsomeres yellow; **FCI**=1.17-1.21 (m=1.19, SD=0.01); **LCI**=1.68-1.76 (m=1.71, SD=0.03); **HW/IOS**=1.54-1.6 (m=1.57 SD=0.01); head less than 1.5 times as wide as mesosoma (**HW/TSL**=1.41-1.48, m=1.43, SD=0.02); facial striae extending midlevel of eye, parallel on frons, obscuring frontal patch; frontal patch indistinct; frons setae rare, thin; central keel complete; toruli triangle shorter than clypeus height; POL as long as OOL (**POL/OOL**=0.96-1.08, m=1.01, SD=0.03); OOL about 2 times as long as LOL (**OOL/LOL**=1.84-2.1, m=1.97, SD=0.09); hyperoccipital carina absent; vertex smooth; genal patch absent; A1 more than 5.0 times as long as radicle (**A1/r**=5.5-6.5, m=6.04, SD=0.34), about as long as clava (**A1/cl**=0.97-1.1, m=1.04, SD=0.04); epomial carina present, reaching pronotal suprahumeral sulcus; cervical and lateral pronotal areas smooth; netrion sulcus incomplete, diminishing ventrally; pronotal suprahumeral and cervical sulci complete, foveolate; mesoscutum about 1.5 times as wide as long (**TSL/ML**=1.45-1.52, m=1.48, SD=0.02); notaulus normal, almost reaching transscutal line; granulose like sculpture of mesoscutum extending to inter and lateral notaular areas, not reaching posterior margin of mesoscutum; mesoscutellum about 2.0 times as wide as long (**SW/SL**=1.96-2.16, m=2.03, SD=0.07); scuto-scutellar sulcus diminishing medially, 4-5 times as wide laterally as in the middle; mesoscutellum smooth, with rare, long marginal setae; posterior scutellar sulcus not extending onto axillula; sternaulus not separated from anterior row of foveae of mesopleural carina; distance between postacetabular sulcus and anterior row of foveae of mesopleural carina equal to foveae width of postacetabular sulcus; mesopleural carina complete, with complete rows of foveae; foveae of mesepimeral sulcus transversely elongated, 4-5 times as long as wide; sulcus along metapleural carina foveolate; metascutellum pointed, metanotal spine marked as a tubercle; propodeal lateral carinae inverted Y-shaped, shafts distinctly curved outward; propodeal lateral and plical areas obscured by pale, dense setae, setal base pustulate, marginal striation not extending medially; posterior propodeal projection

indistinct; forewing slightly wider than mesoscutum (**TSL/WW**=0.81-0.98, m=0.89, SD=0.05); marginal vein about 3 times as long as stigmal vein (**m/st**=2.8-3.1, m=2.94, SD=0.10); hind wing about two times as wide as marginal ciliae length (**HWW/HWS**=2.0-2.15, m=2.02, SD=0.05); T1, less than 1.5 times as wide as T1+T2 length (**T1W/T1+T2L**=1.03-1.30, m=1.18, SD=0.08); T3 about 1.5 times as wide as long (**T3W/T3L**=1.4-1.7, m=1.55, SD=0.08), as wide as mesoscutum (**T3W/TSL**=0.93-1.08, m=0.99, SD=0.04); costae on T3 reaching middle of tergum medially; lateral patch distinct, reduced; diameter of posterior patch of T3 nearly equal to width of one basal grooves; lateral patch on T4 present, median patch marked by punctures.

MALE (n=4): **FCI**=1.22-1.25 (m=1.23, SD=0.01); **HW/IOS**=1.480-1.483, (m=1.48 SD=0.00); **A1/r**=4.75-4.87 (m=4.78, SD=0.06); A5 not modified, A2-A6 unibottled, A7-A11 dibottled, antennomeres with numerous ventral microcilia ventrally; **TSL/WW**=0.68-0.75 (m=0.71, SD=0.04);

DIAGNOSIS: Most closely related to *X. laticeps*, differs by absence of vertex patch, numerous ventral microcilia on male antennomeres, granulose mesoscutum of females, presence of netrion sulcus, more elongated fovea of mesepimeral sulcus and reduced metanotal spine.

MATERIAL EXAMINED: Holotype female: 1. label**:** Xenomerus varipes, Dodd, male, type (hand writing); 2. label: I. 2005, Xenomerus varipes Dodd, Queensland, also slide.

Other material examined: **AUSTRALIA: Qld**, Brisbane Forest Park, 27 25'04"S, 152 49'48"E, 30.VIII.-4.IX.1998, N.Power, Malaise trap, 1female; Qld, Brisbane, Forest Park, Northbrook Pkwy, along riverbed, 5-6.xii.2002, 27˚18.26'S 152˚41.44'E, YPT, J.George, J.Munro, A.Owen, 1male, 1female; Qld, Mt. Glorious, 27 19'54"S, 152 45'29'E, 13-23.III.1998, N.Power, malaise trap, 3female; 27.III.1998, canopy Mal. tp., 1female; 11.III.MT., 2male; 630m. Qld, Mt.Glorious N.P., Feb.28.1984, s.s. L.Masner, Trop. Rain & sclerophyl for. mixed, s.s., 1female, 1; 27 19'54"; Qld, Mt. Tambourine, 22.VI.-6.VII.78, S.+J.Peck, 500m, malaise, wet sclerophyl stream edge, 2female, 1male; 200m, Qld, Landsborough Shire, March.8.1984, s.s., L.Masner, 1female; Qld, Tully River Falls Road, Misty mountains Trail, 12.IX.2004, s.s., Q-11, L.Masner, rainforest, 1female. Qld, Brisbane, Samsonvale, Cemetery, 29.IX.1998., M.Shauff, sweeping; QUEENSLAND, Kuranda, 2.XII.82., Bouček.

NOTES: The head and wings of the holotype are lost.

Xenomerus watshami, new species

Figures 225, 226, 274, 276, 288

FEMALE (HT)**:** Length=1.2 mm. black; antenna, coxae, mesopleuron, metasoma dark brown; inter antennal process, radicle, A5-6, A1 distally, mandible and legs, excluding coxae, yellowish-brown; **FCI**=1.2; **LCI**=1.77; **HW/IOS**=1.63; head less than 1.5 times as wide as mesosoma (**HW/TSL**= 1.40); facial striae exceeding midlevel of eye along inner orbit, reaching frontal patch; frontal patch distinct, oblique, transverse; frons setae rare, thin; central keel incomplete; toruli triangle shorter than clypeus height; POL almost 3.0 times as long as OOL (**POL/OOL**=2.9); OOL shorter than LOL

(**OOL/LOL**=0.73); hyperoccipital carina present, blunt, not extending to inner orbit; vertex entirely reticulate; genal patch present, not merging with vertex sculpture; A1 almost 4.0 times as long as radicle (**A1/r**=3.84), as long as clava (**A1/cl**=0.98); epomial carina present, diminishing medially; cervical pronotal area smooth, with scattered setae; lateral pronotal area near epomial carina reticulate, with few crenulae above pronotal ventral projection; netrion sulcus complete; netrional striation not extending onto lateral pronotal area; pronotal suprahumeral and cervical sulci complete, foveolate; mesoscutum about 1.5 times as wide as long (**TSL/ML**=1.55); notaulus short, reduced, not reaching transscutal line; reticulate sculpture of mesoscutum extending to lateral notaular area; not extending to inter notaular area; mesoscutellum 2.0 times as wide as long (**SW/SL**=2.00); scuto-scutellar sulcus distinctly diminishing medially, 3-4 times as wide laterally as in the middle; mesoscutellum smooth, with rare, long setae; posterior scutellar sulcus extending onto axillula; sternaulus not separated from anterior row of foveae of mesopleural carina, distance between postacetabular sulcus and anterior row of foveae of mesopleural carina 3-4 times as wide as foveae width of postacetabular sulcus; mesopleural carina complete, with complete rows of foveae, maximal distance between posterior row of foveae of mesopleural carina and mesepimeral sulcus 5 times as long as width of posterior row of foveae of mesopleural carina; sulcus along metapleural carina foveolate; metascutellum sharply pointed; propodeal lateral carinae inverted V-shaped, shafts slightly curved outward; propodeal lateral area and plical area obscured by pale, dense setae, marginal striation not extending medially; posterior propodeal projection absent; forewing as wide as mesoscutum (**TSL/WW**=0.94); marginal vein 4 times as long as stigmal vein (**m/st**=3.3); hind wing almost three times as wide as marginal ciliae length (**HWW/HWS**=2.91); T1 about 2 times as wide as T1+T2 length (**T1W/T1+T2L**=1.91); T3 as wide as mesoscutum (**T3W/TSL**=0.94), costae on T3 extending to middle of tergum; lateral patch distinct; diameter of posterior patch of T3 nearly equal to width of one basal groove; lateral and median patches on T4 present not fused.

VARIABILITY (n=20): Length=0.98-1.39 mm (m=1.17, SD=0.13); inter antennal process in smaller specimens concolor with head; **FCI**=1.2-1.25 (m=1.22, SD=0.02); **LCI**=1.66-1.85 (m=1.73, SD=0.05); **HW/IOS**=1.54-1.66 (m=1.6, SD=0.05); **HW/TSL**=1.34-1.5 (m=1.4, SD=0.04); Facial striae shortened in smaller specimens, not reaching eye midlevel along inner orbit; **POL/OOL**=2.9-3.25 (m=3.09, SD=0.13); **OOL/LOL**=0.75-0.63 (m=0.69, SD=0.03); **A1/r**=3.70-4.0 (m=3.87, SD=0.12); **A1/cl**=0.9-1.075 (m=0.97, SD=0.06); **TSL/ML**=1.45-1.52 (m=1.48, SD=0.03); **SW/SL**==1.95-2.0 (m=1.99, SD=0.04); **TSL/WW**=0.93-1.5 (m=0.98, SD=0.05); **m/st**=3.0-3.33 (m=3.23, SD=0.06); **HWW/HWS**=2.63-3.5 (m=1.17, SD=0.13); **T1W/T1+T2L**=1.82-2.0 (m=1.91, SD=0.07); **T3W/TSL**=0.9-0.96 (m=0.93, SD=0.02), in smaller specimens costae reduced on T3, not exceeding middle of tergum.

MALE (n=10): length=1.14-1.32 (m=1.2, SD=0.06); A1 and apices of antennomeres yellow, coxa yellow to bright brown; head wider (**FCI**=1.29-1.34, m=1.31, SD=0.02) and longer (**LCI**=1.5-1.62, m=1.56, SD=0.05); **HW/IOS**=1.42-1.51 (m=1.48, SD=0.03); **HW/TSL**=1.33-1.39 (m=1.36,

SD=0.02); frontal patch less transverse; OOL longer (**POL/OOL**=2.5-2.72, m=2.59, SD=0.07); **OOL/LOL**=0.9-1.0, m=0.97, SD=0.05); **A1/r**=3.75-4.08 (m=3.98, SD=0.13); A5 modified; A7-A11 double bottled, with distinct constrictions; antennomeres with specialized brushes; **TSL/ML**=1.30-1.37 **(**m=1.34, SD=0.02); notaulus longer, extending to transscutal line; **SW/SL**=1.95-2.04 **(**m=2.0, SD=0.03); posterior row of foveae of mesopleural carina reduced, sometimes absent ventrally; **TSL/WW**=0.81-0.98 (m=0.90, SD=0.08); **m/st**=3.5-4.2 (m=3.97, SD=0.38); **HWW/HWS**=2.33-2.72 (m=2.55, SD=0.15); metasoma longer (**T1W/T1+T2L**=1.44-1.68, m=1.58, SD=0.07); **T3W/TSL**=0.95-1.04, m=0.94, SD=0.04); costae reduced on T3, not extending to middle of tergum; diameter of posterior patch of T3 equal to width of 2-3 basal grooves.

DIAGNOSIS: Differs from all other species of comatus group by POL 3 times as long as OOL. Most closely related to *X. aureipes*, differs by POL/OOL, incomplete central keel, presence of genal patch, shortened notaulus in female and sculptured vertex in male.

ETYMOLOGY: named after Antony Watsham, the collector of numerous specimens of this species.

MATERIAL EXAMINED: Holotype female: **BOTSWANA**: Serowe Farmer's Brigade Dec.1987, F.Forchhammer MT. Paratypes: 2female, 3male with same data as holotype; **RHODESIA (ZIMBABWE)**: Salisbury, pan trap XI-XII.1981, Watsham 2female; I-III.1975, 1male; XI-XII.1975, 1female; I-IV.1976, 2female; V-VII. 1976, 1female; 1977, 1female; Oct.1979, 1female; Feb.1980, 1female, 1male; X.1980, 1male; XII.1980, 1female; Oct.1981, 2male; Salisbury, Chishawasha, III.1980, 1female; viii.1979, 1female. **BURKINA FASO**: Gourma Kompiembiga (15km W.Pama), 15-24.IX.1988, F.Génier & M.Sanborne, savane, filet fauchoir, 1female; Gourma Kompienga (20km S.Pama) 3-24.IX.1988, F.Génier, M.Sanborne & F.M.Tou, savane, piége malaise, 1female; Gourma Kompienga (20km S.Pama) 1-16.VI.1988, Sanborne, Landry & Tou, Savane, lit de riviére, p.á intercept, 1female. **BENIN**: Abomey-Calavi ca.25km N. Cotonou, MT XII.1988, J.S.Noyes, 4female, 1male. **KENYA**: Nyanza Lake Victoria, 1145m 0.615°S, 34.092°E 17-26.VII.1998, S.Miller, MT ICIPE, 1female. **IVORY COAST**: Bouaké IV. 1980, P.Cochereau, 1female; 1.X.1981, 1male. **REPUBLIC OF SOUTH AFRICA**: Trans. 15km E. Klaserie Guernsey Farm 19-31.XII.1985 M.Sanborne, 1male; **UNITED ARAB EMIRATES**: al-Ajban, 24.36.N.55.01E, 17-24.iv.2006. Malaise trap, Anthony van Harten, 3900, 1female; Wadi Maidag, 25.18.N.56.07.E, 29.iii-10.iv.2006. in white and yellow water trap, Anthony van Harten, 4047, 2female; Sharjah Desert Park, 25.17.N.55.42.E, 06-30.iv.2005, light trap, Anthony van Harten, 1852, 1female. Holotype is deposited in SANC; 5 paratypes in BMNH, 5 in SAMC, 28 in CNCI.

COMMENTS: *X. watshami* varies in many characters including the body length. Most of variabilities seem to be resulted by allometric change (e.g. the smaller specimens the shorter sulci on T3 and facial striae). Specimens of different size were collected at the same locality (e.g. length of specimens collected in RHODESIA (ZIMBABWE), Salisbury vary between 1.02 and 1.39 mm). We consider them as individuals of the same population, therefore the above mentioned variability might be irrespective of the geographic distribution.

Xenomerus yamagishii, new species

Figures 207, 208

FEMALE (HT): Length=0.89 mm. Ochre; A3-A2, T3 posteriorly and T4-T6 entirely dark brown; **FCI**=1.14; **LCI**=1.73; **HW/IOS**=1.58; head less than 1,5 times as wide as mesosoma (**HW/TSL**= 1.3); facial striae not exceeding midlevel of eye; frontal patch distinct; frons setae dense, setae thin; central keel complete; toruli triangle shorter than clypeus height; POL almost as long as OOL (**POL/OOL**=1.15); OOL more than 1.5 times as long as LOL (**OOL/LOL**=1.62); hyperoccipital carina absent; vertex patch present, with diameter equal to lateral ocellus; vertex setae denser behind POL area; genal patch absent; A1 more than 5 times as long as radicle (**A1/r**=5.37), as long as clava (**A1/cl**=1.07); epomial carina absent; cervical pronotal area smooth, with scattered setae along lateral and dorsal margin; lateral pronotal area near epomial carina reticulate, with scattered setae, ventrolaterally smooth; netrion sulcus incomplete; pronotal suprahumeral sulcus diminishing medially, foveolate; pronotal cervical sulcus not foveolate; anterior tip of pronotum reduced; mesoscutum more than 1.5 times as wide as long (**TSL/ML**=1.82); notaulus absent; mesoscutum with dense setae; mesoscutum sculpture extending to posterior margin; mesoscutellum 2.0 times as wide as long (**SW/SL**=2.02); scuto-scutellar sulcus slightly diminishing medially, 1.5 times as wide laterally as in the middle; mesoscutellum anteriorly punctuate, with fine wrinkles between punctures, with dense setae; posterior scutellar sulcus extending onto axillula; sternaulus not separated from anterior row of foveae of mesopleural carina; distance between postacetabular sulcus and anterior row of foveae of mesopleural carina 2.5 as long as foveae width of postacetabular sulcus; mesopleural carina complete, with complete rows of foveae, maximal distance between posterior row of foveae of mesopleural carina and mesepimeral sulcus two times as long as width of posterior row of foveae of mesopleural carina; sulcus along metapleural carina foveolate; metascutellum bluntly triangular, entirely striated; propodeal lateral carinae S- shaped; propodeal lateral area and plical area obscured by rare setae, entirely striated; posterior propodeal projection distinct, tubercle like; forewing almost as wide as mesoscutum (**TSL/WW**=1.13); marginal vein more than 3 times as long as stigmal vein (**m/st**=3.1); hind wing less than 2 times as wide as marginal ciliae length (**HWW/HWS**=1.76); T1 about 1.5 times as wide as T1+T2 length (**T1W/T1+T2L**=1.57); T3 as wide as mesoscutum (**T3W/TSL**=1.01); basal grooves thin; costae exceeding to middle of tergum; lateral patch indistinct; diameter of posterior patch of T3 nearly equal to width of one basal groove, indistinct; T3 with dense setae laterally; apical setae of T3 elongate (T3l/asT3=1.6); lateral patch on T4 present, median patch absent.

VARIABILITY (n=11): Length=0.86-1.05 mm (m=0.93, SD=0.07); sometimes mesoscutellum dark ochre; **FCI**=1.13-1.18 (m=1.16, SD=0.01); **LCI**=1.64-1.88 (m=1,73, SD=0.07); **HW/IOS**=1.56-1.75 (m=1.63, SD=0.05); **HW/TSL**=1.22-1.3 (m=1.28, SD=0.02); **POL/OOL**=1-1.15 (m=1.1, SD=0.04); **OOL/LOL**=1.62-1.77 (m=1.68, SD=0.04); **A1/r**=5.87-6.42 (m=6.13, SD=0.16); **A1/cl**=1.06-1.16 (m=1.11, SD=0.03); **TSL/ML**=1.75-1.92 (m=1.84, SD=0.05); **SW/SL**==1.9-2.23 (m=2.05, SD=0.09;

TSL/WW=0.98-1.19 (m=1.09, SD=0.07); **m/st**=2.91-3.10 (m=2.28, SD=0.04); **HWW/HWS**=1.76-2.38 (m=2, SD=0.25); **T1W/T1+T2L**=1.5-1.75 (m=1.66, SD=0.09); **T3W/TSL**=1-1.09 (m=1.02, SD=0.03), sometimes T4 reticulate medially, smooth submedially.

MALE (n=5): length=0.93-1.11 (m=0.99, SD=0.07); A1-2 yellow to light brown, A3-A12 light brown to dark brown, metasoma mesonotum and vertex around ocelli brown; head wider (**FCI**=1.28-1.34, m=1.3, SD=0.02); **LCI**=1.56-1.65, m=1.61, SD=0.04); **HW/IOS**=1.5-1.6 (m=1.55, SD=0.03); **HW/TSL**=1.33-1.44 (m=1.38, SD=0.04); OOL longer than POL (**POL/OOL**=0.83-0.95, m=0.86, SD=0.04) **OOL/LOL**=2.11-2.33 (m=2.23, SD=0.08); **A1/r**=3.75-4.6 (m=4.28, SD=0.34); A5 modified; A7-A11 with two whorls of setae and weak (Thailand) or strong (Japan) constrictions in-between; antennomeres with 5-6 (Japan) or 10-12 (Thailand) ventral microcilia; **TSL/ML**=1.66-1.85 **(**m=1.73, SD=0.07); notaulus present, almost exceeding TSL; **SW/SL**=2-2.25 **(**m=2.11, SD=0.11); **TSL/WW**=0.73-0.86 (m=0.82, SD=0.05); **m/st**=3.0-3.33 (m=3.2, SD=0.04); **HWW/HWS**=1.73-2.13 (m=1.89, SD=0.18); **T1W/T1+T2L**=1.15-1.5 (m=1.34, SD=0.13); **T3W/TSL**=0.96-1.06 (m=1, SD=0.04).

DIAGNOSIS: Most closely related to *X. ochraceus*, differs by complete central keel, thin basal grooves on T3 and POL/OOL ratio. Shared with *X. guinensis* the thin basal grooves and elongated costae on T3 extending to middle of tergum and differs by complete central keel and dense setae on frons.

ETYMOLOGY: named after K. Yamagishi who collected the type material of this species.

MATERIAL EXAMINED: Holotype female: **JAPAN**: Aichi Pref. Narai, Toyota 30.VII.-7.VIII.1990, K.Yamagishi, PT**.** Paratypes: 8-17.VIII.1990. 1female, 1male; Aichi Douzuki, Obara, 15-22.VII.1990, 1female, 1male; 23-29.VII.1990, 1female; 6-12.IX.1990, 1female; Ibaraki Tsukuba, NIAES 14-25.VII.1989. M.Sharkey, PT, 1male. **INDONESIA**: Sulawesi, Dumoga-Bone Nat.Park Toraut, 15-20.VI.1985. MT forest edge, BMNH, Wallace expedition, 1female; Utara Domoga-Bone N.P. Toraut, 220m 9-16.V.1985. John S.Noyes, 1female. **TAIWAN:** Taitung Hsien, Hsinkangshan above Chengkung, 350m, 25-28.IV.1995. A.Smetana (T163), 1female; 800m 26-28.IV.1995, (T.165), 1female. **INDIA**: Karnataka, Bangalore, ICAR XII.2003. J.Poorani MT, 1female. **THAILAND**: Khao Yai N. P. 10-17.II.1989. T.W.Thormin, MT, 1female; KhaoYai N. P. 900m 30.VI.1990. J.Heraty, rnfor, 1female, 1male; Chang Kiang Doi Suthop, 16.II.1985. D.Jackson, riv.gully, 1male. Holotype and 12 paratypes are deposited in CNCI; 3 paratypes in BMNH, 2 in SANC.

SPECIES NOT TREATED:

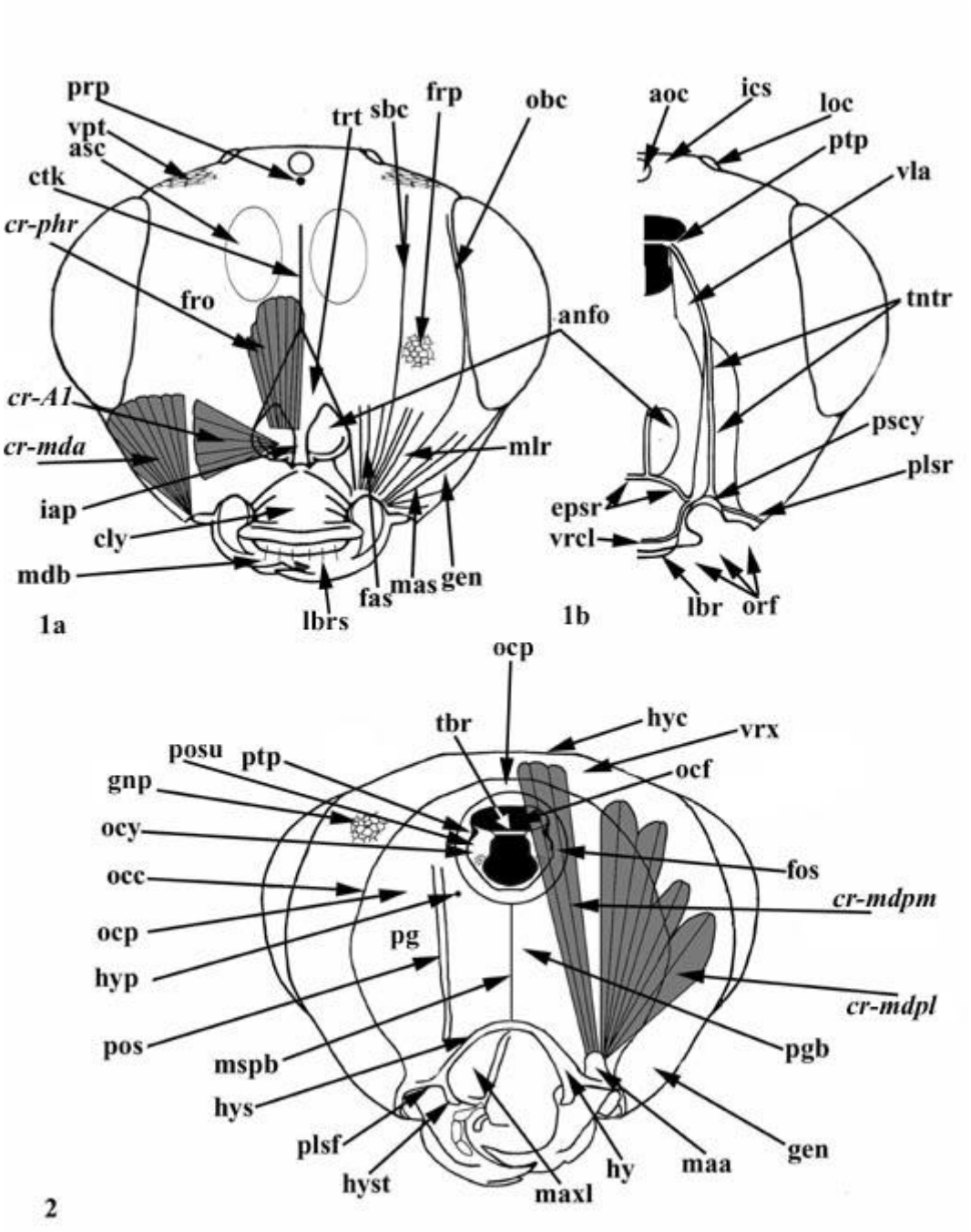
Xenomerus indicus Mukerjee, 1981. Deposited in the USNM; only the left fore and hind wings and one antenna left on slide.

Xenomerus solox Kozlov et Lé 1986. Deposited in BIHV; type not allowed to be examined.

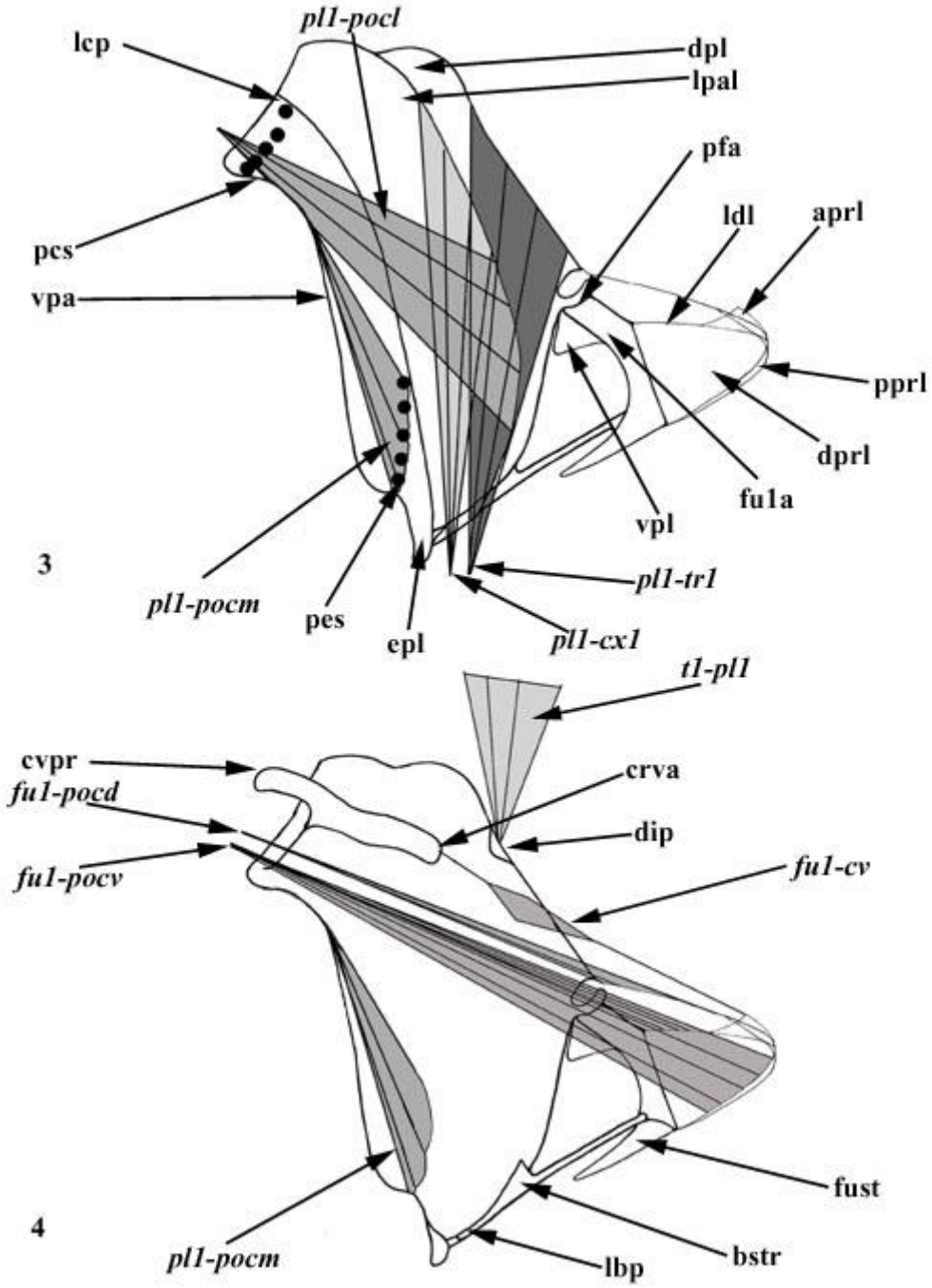
Xenomerus forax Kozlov et Lé, 1986. Deposited in the BIHV; type not allowed to be examined.

Xenomerus flavicornis Dodd, 1914: 84. Deposited in SAMC; type lost.

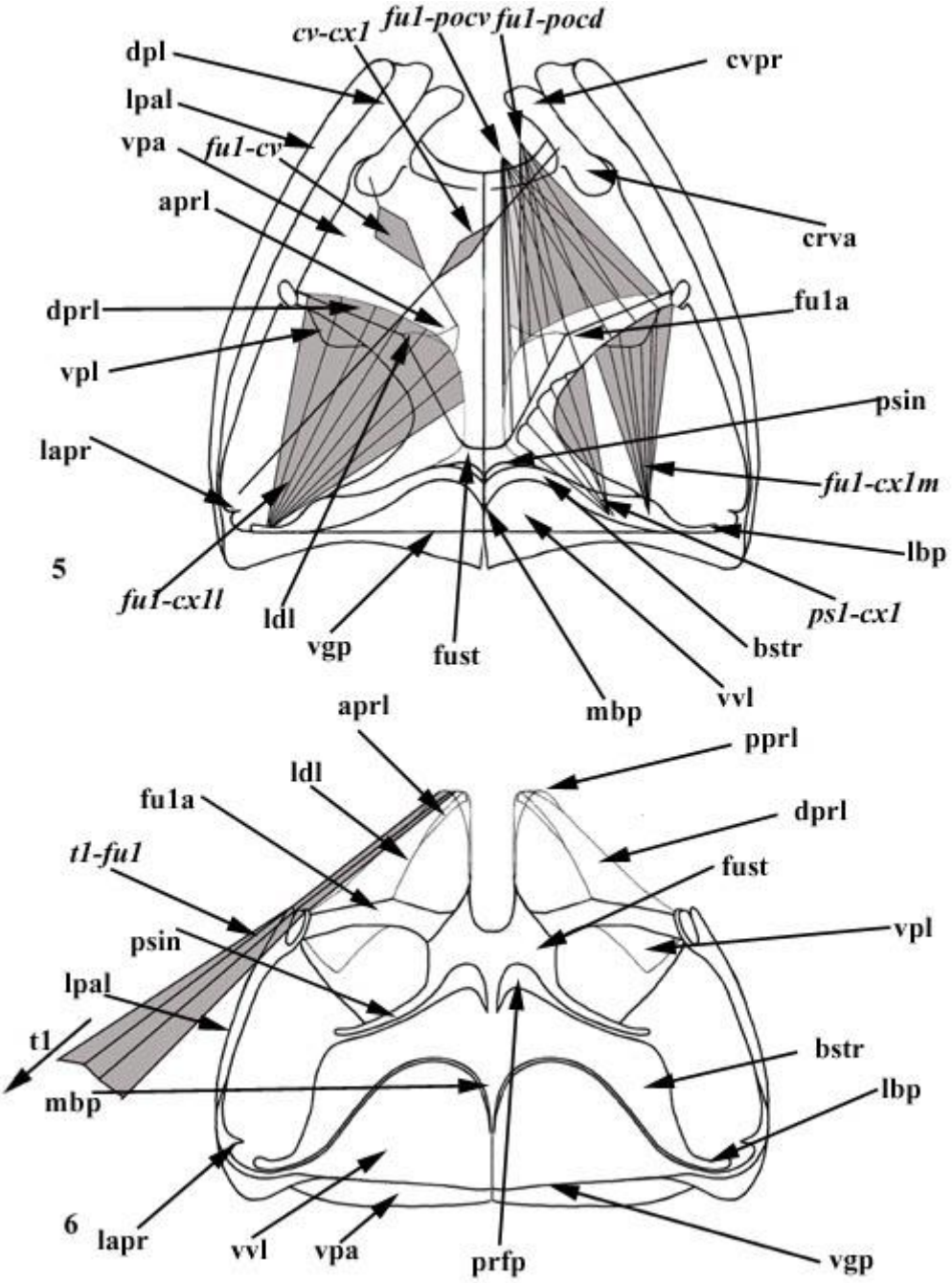
APPENDIX 7. Figures 1-288.



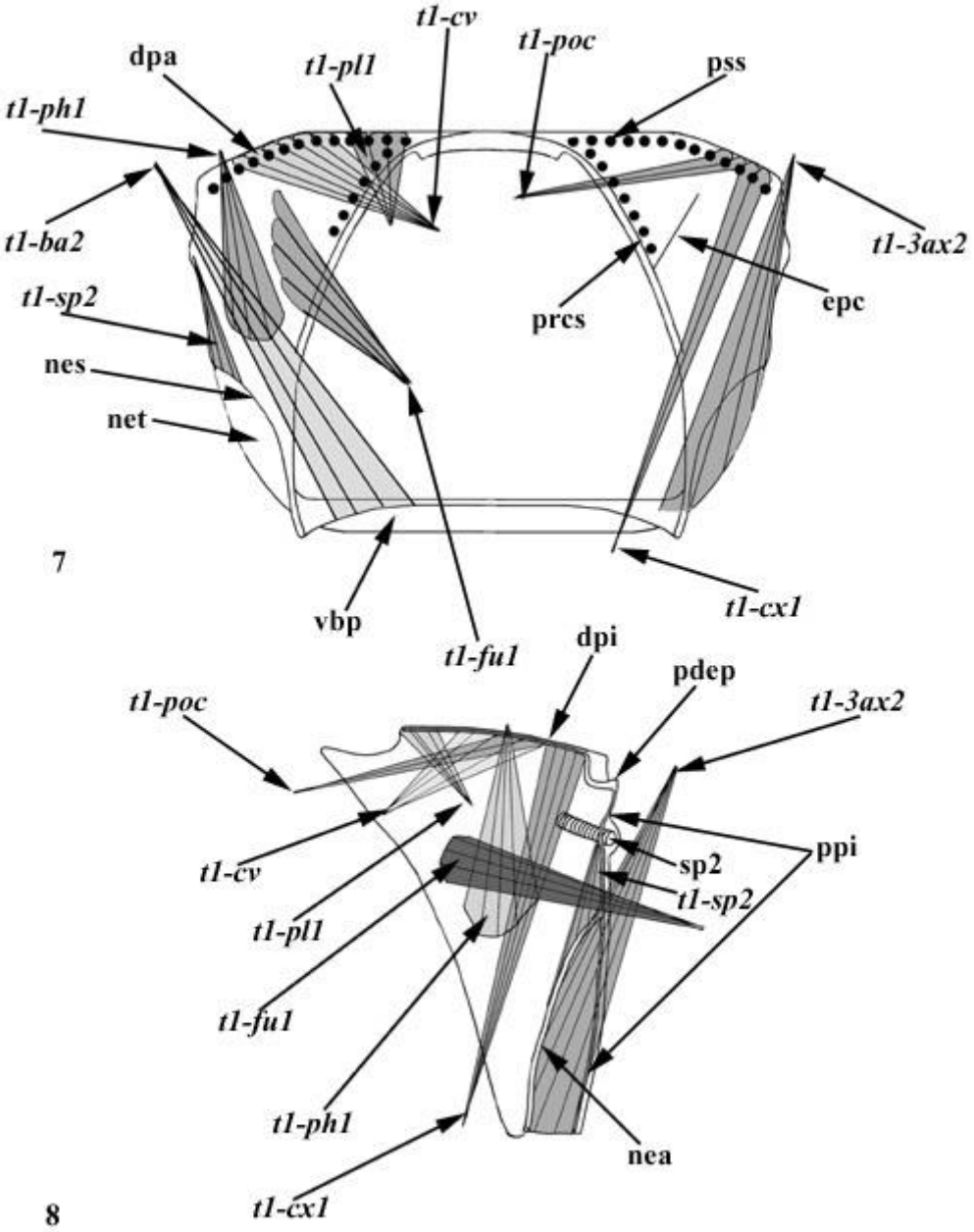
FIGURES 1, 2. Generalized scelionid. 1, head, anterior view (a=external, b=internal); 2, head, posterior view.



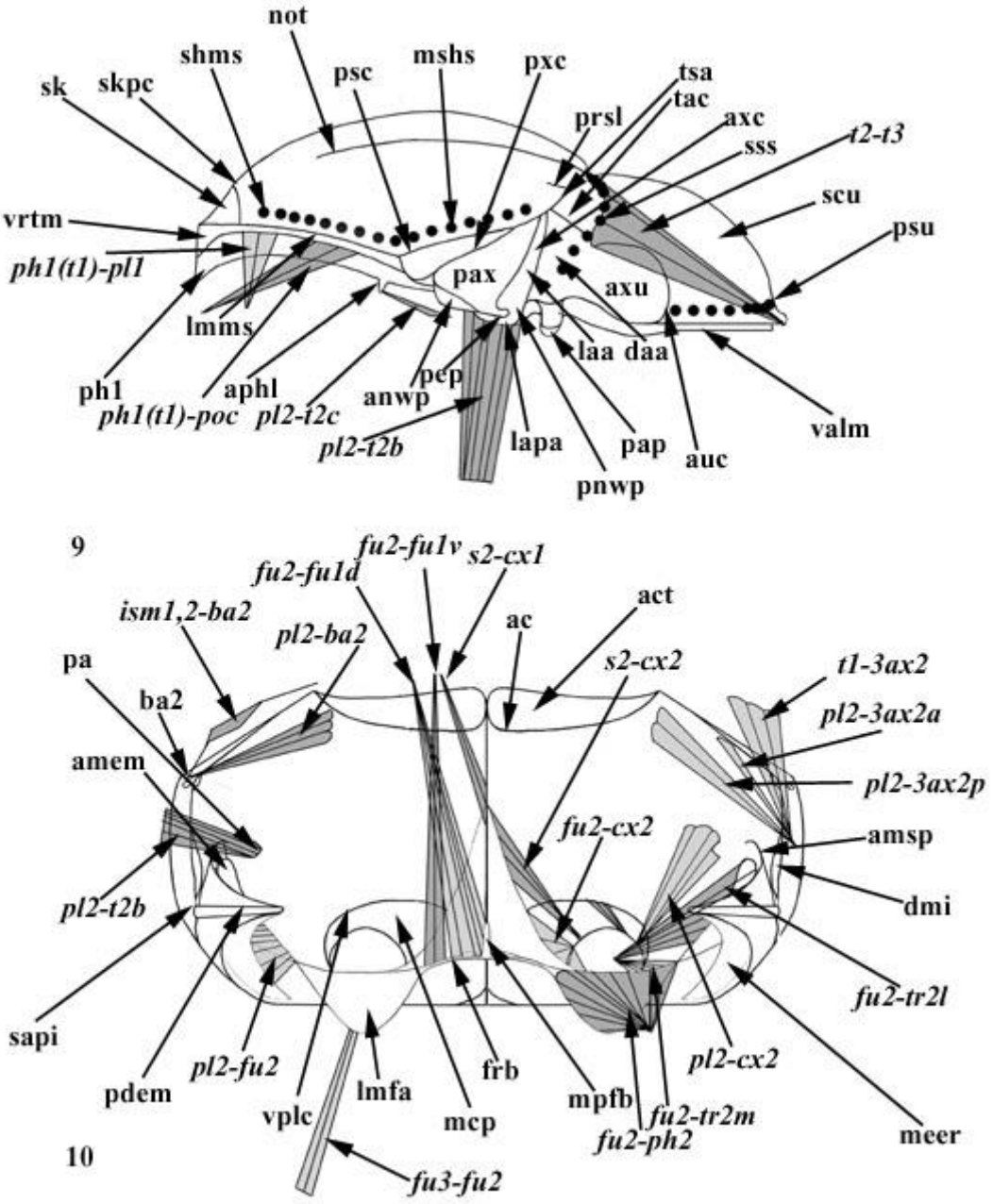
FIGURES 3, 4. Generalized scelionid. 3, propectus, lateral view; 4, propectus, median view.



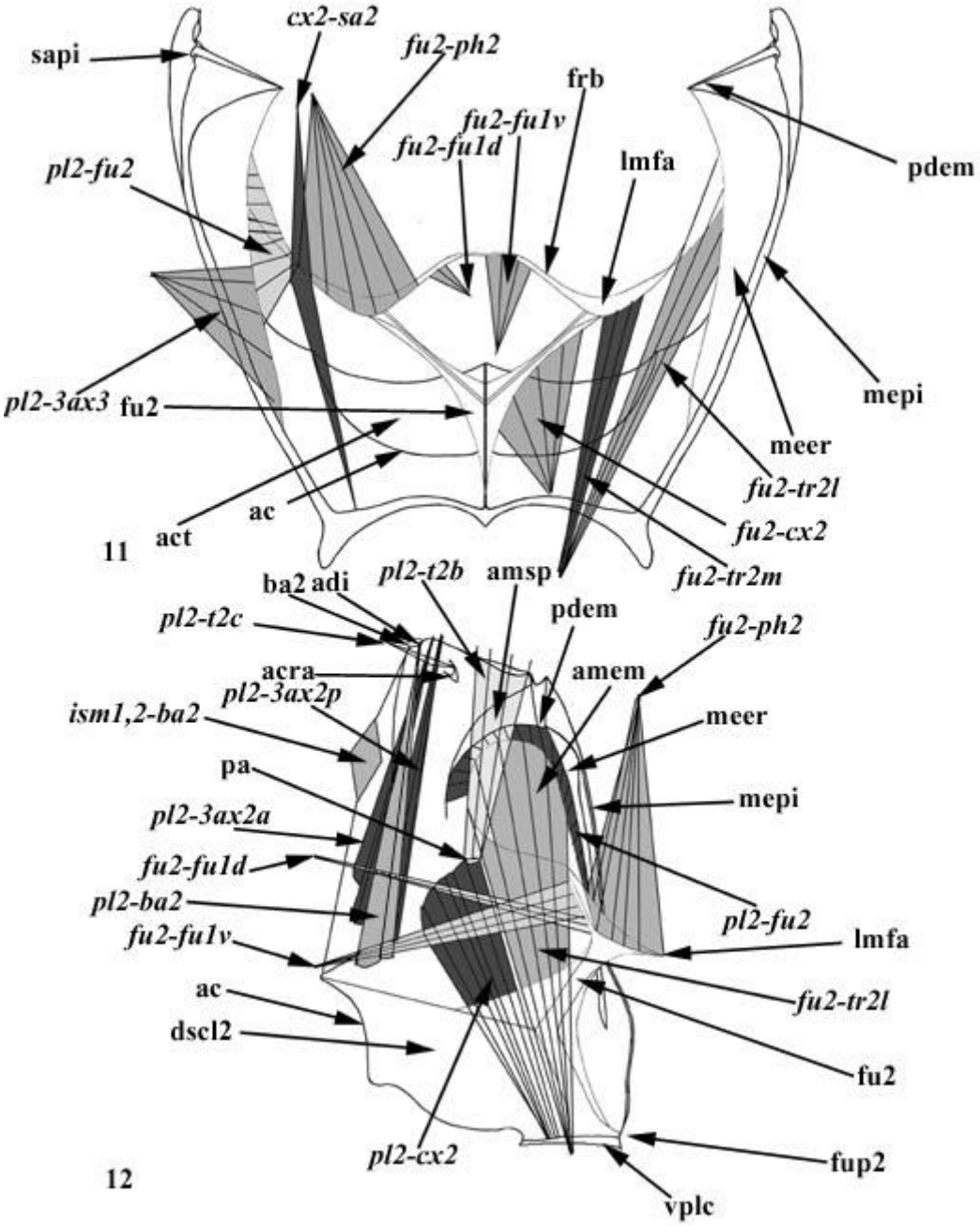
FIGURES 5, 6. Generalized scelionid. 5, propectus, posterior view; 6, propectus, ventral view.



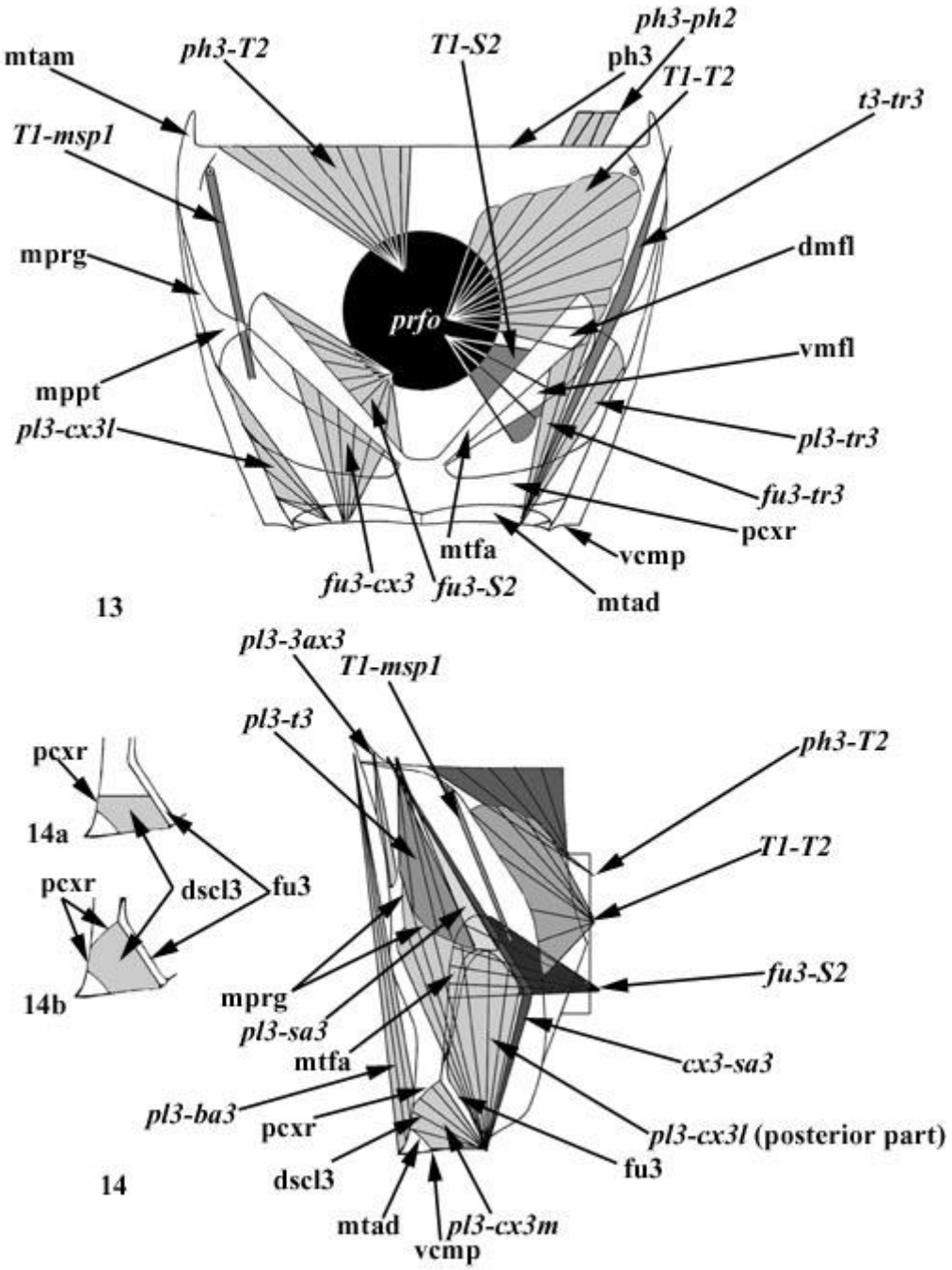
FIGURES 7, 8. Generalized scelionid. 7, pronotum, anterior view; 8, pronotum, median view.



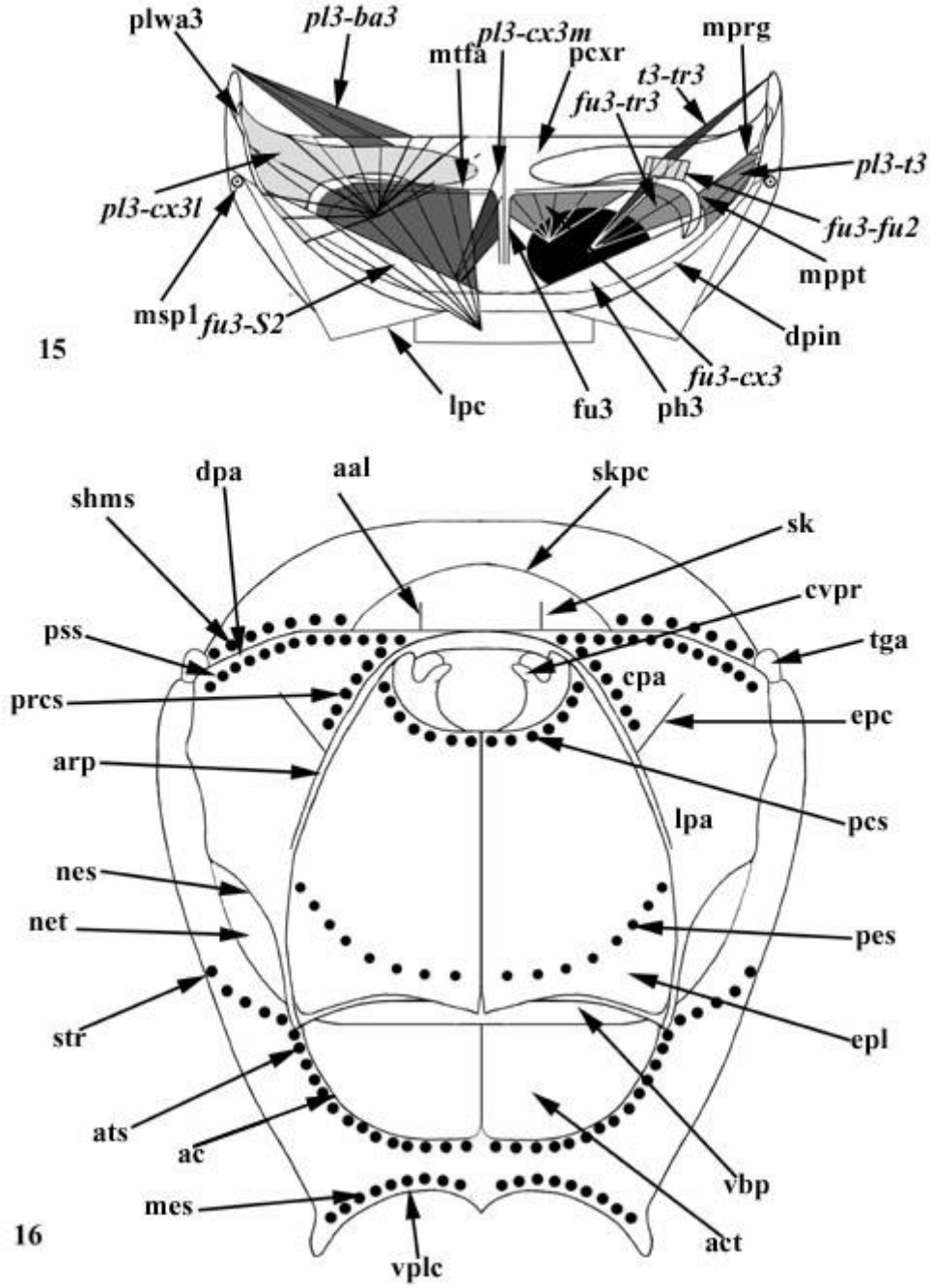
FIGURES 9, 10. Generalized scelionid. 9, mesonotum, lateral view; 10, mesopectus, dorsal view.



FIGURES 11, 12. Generalized scelionid. 11, mesopectus, posterior view; 12, mesopectus median view.



FIGURES 13, 14. Generalized scelionid. 13, metapectal-propodeal complex, anterior view; 14, metapectal-propodeal complex median view; 14a, b, discrimenal lamella and paracoxal ridge, median view.



FIGURES 15, 16. Generalized scelionid. 15, metapectal-propodeal complex dorsal view; 16, mesosoma, dorsal view.

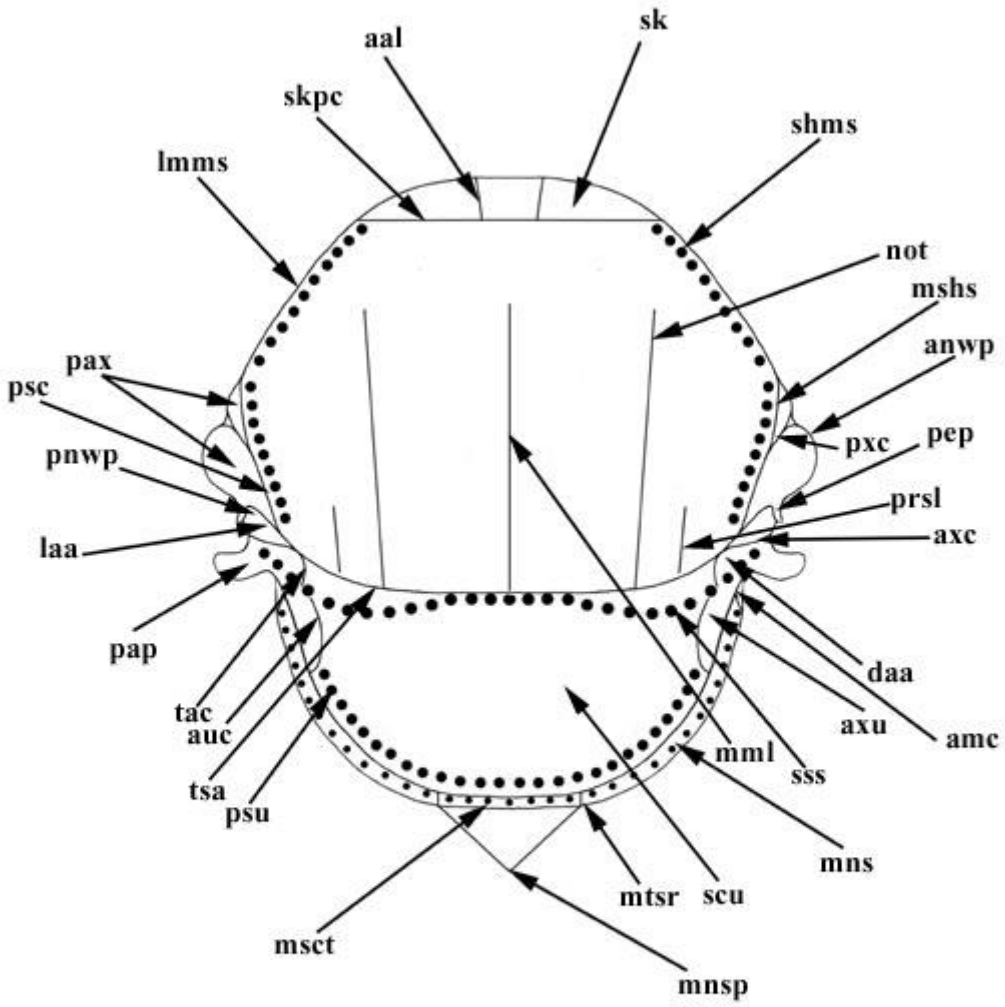


FIGURE 17. Generalized scelionid, mesonotum dorsal view.

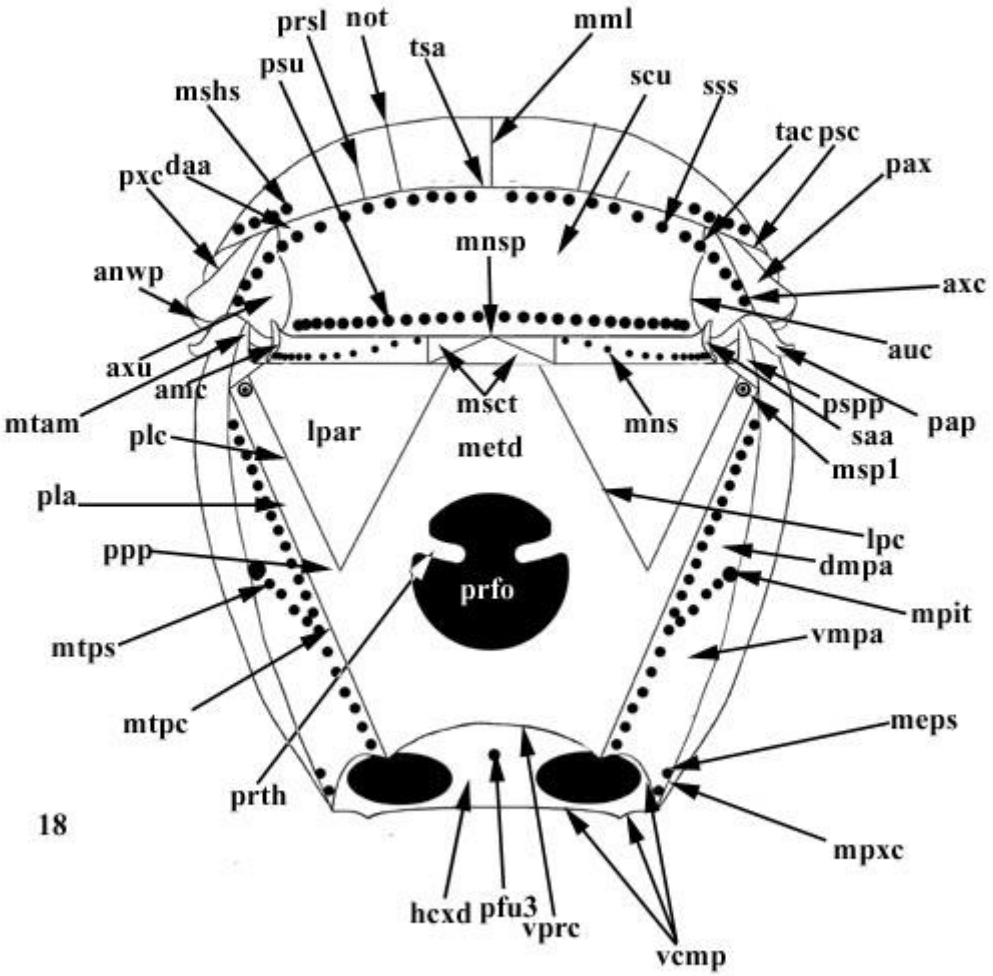


FIGURE 18. Generalized scelionid, mesosoma, posterior view.

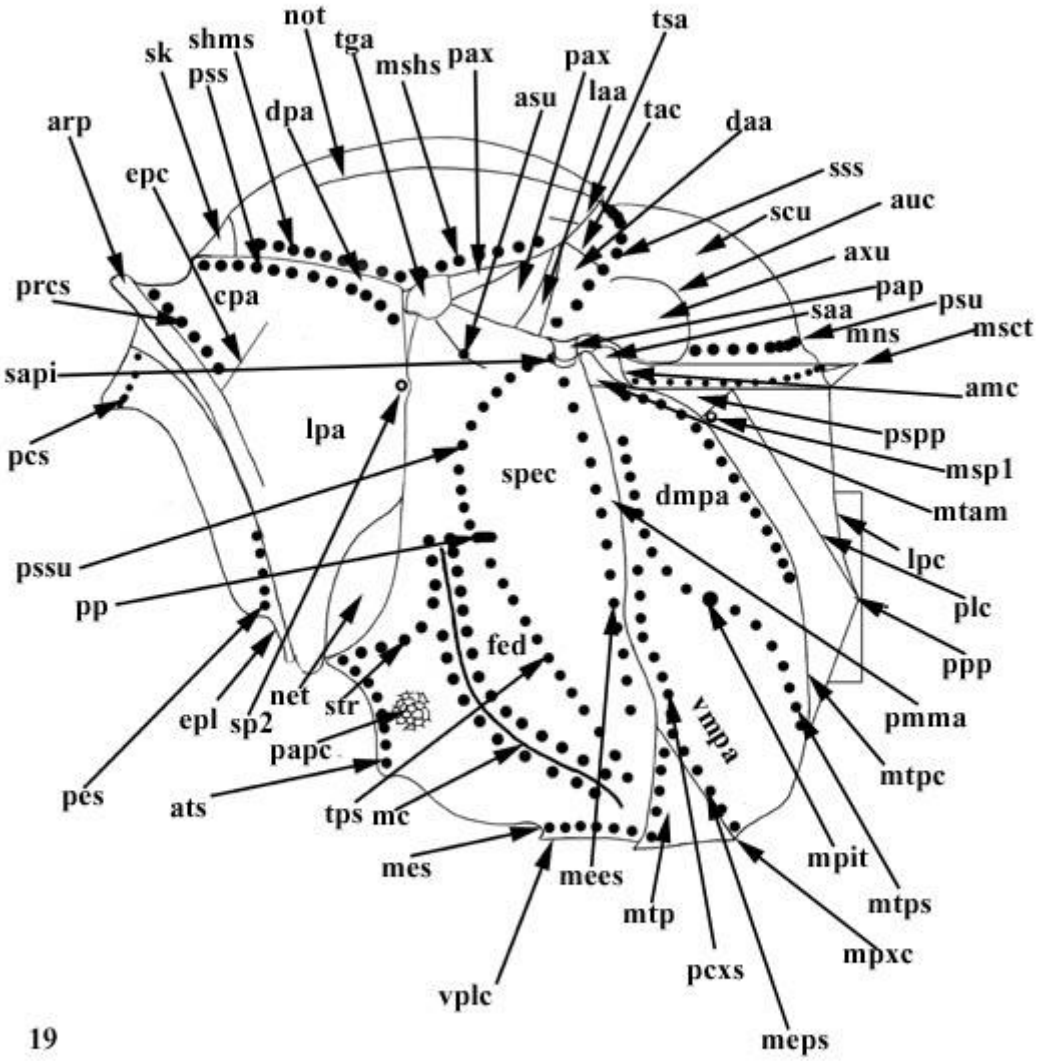
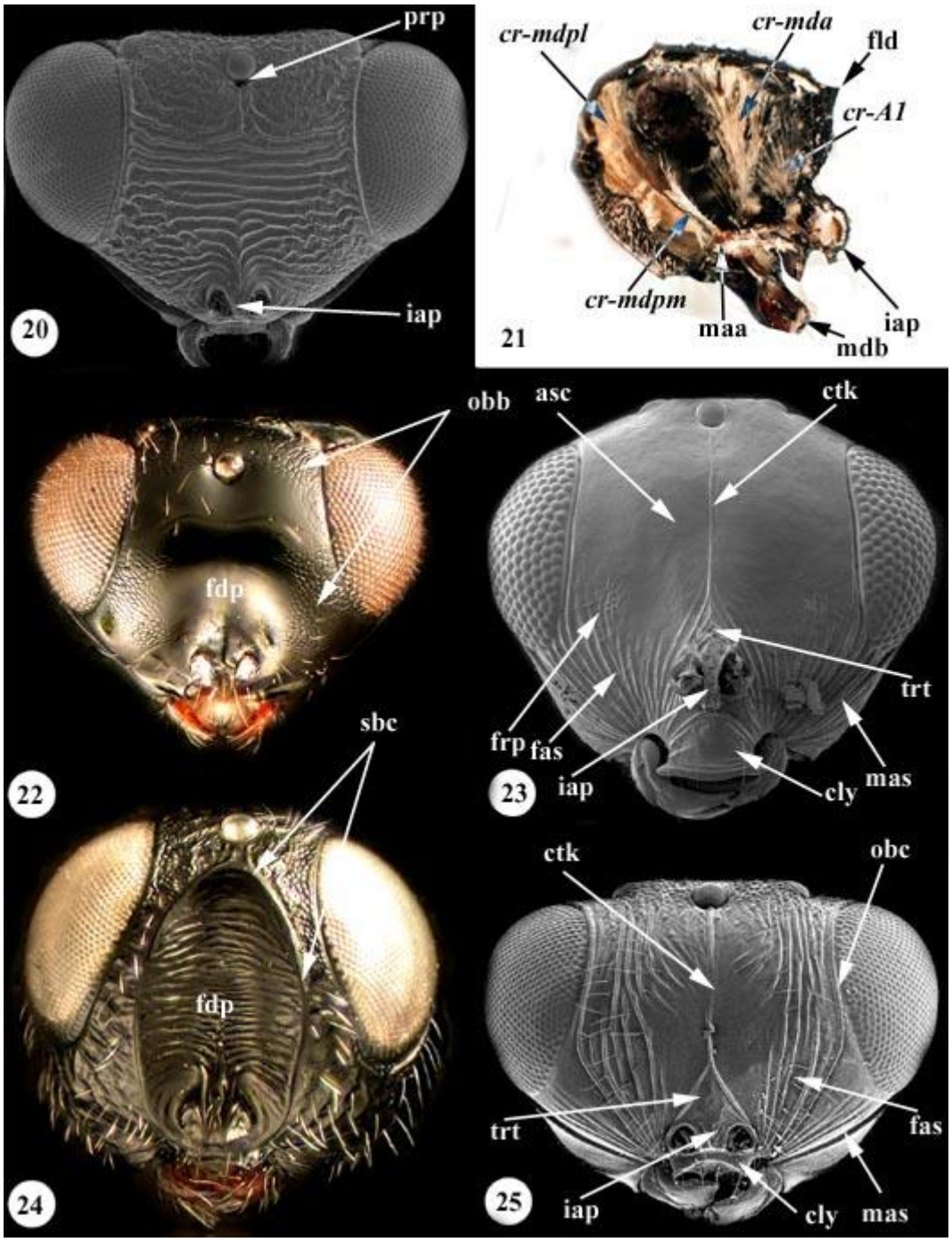
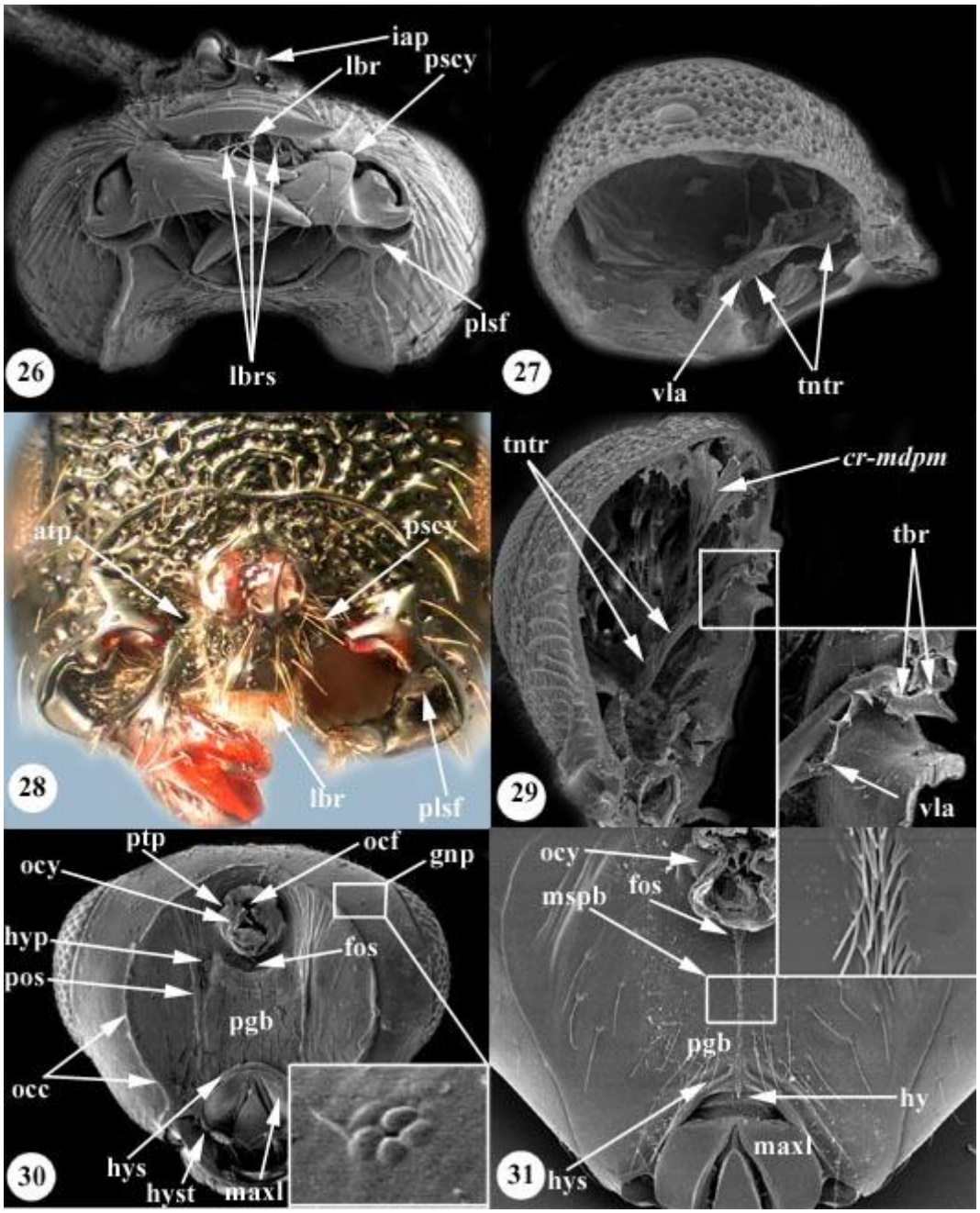


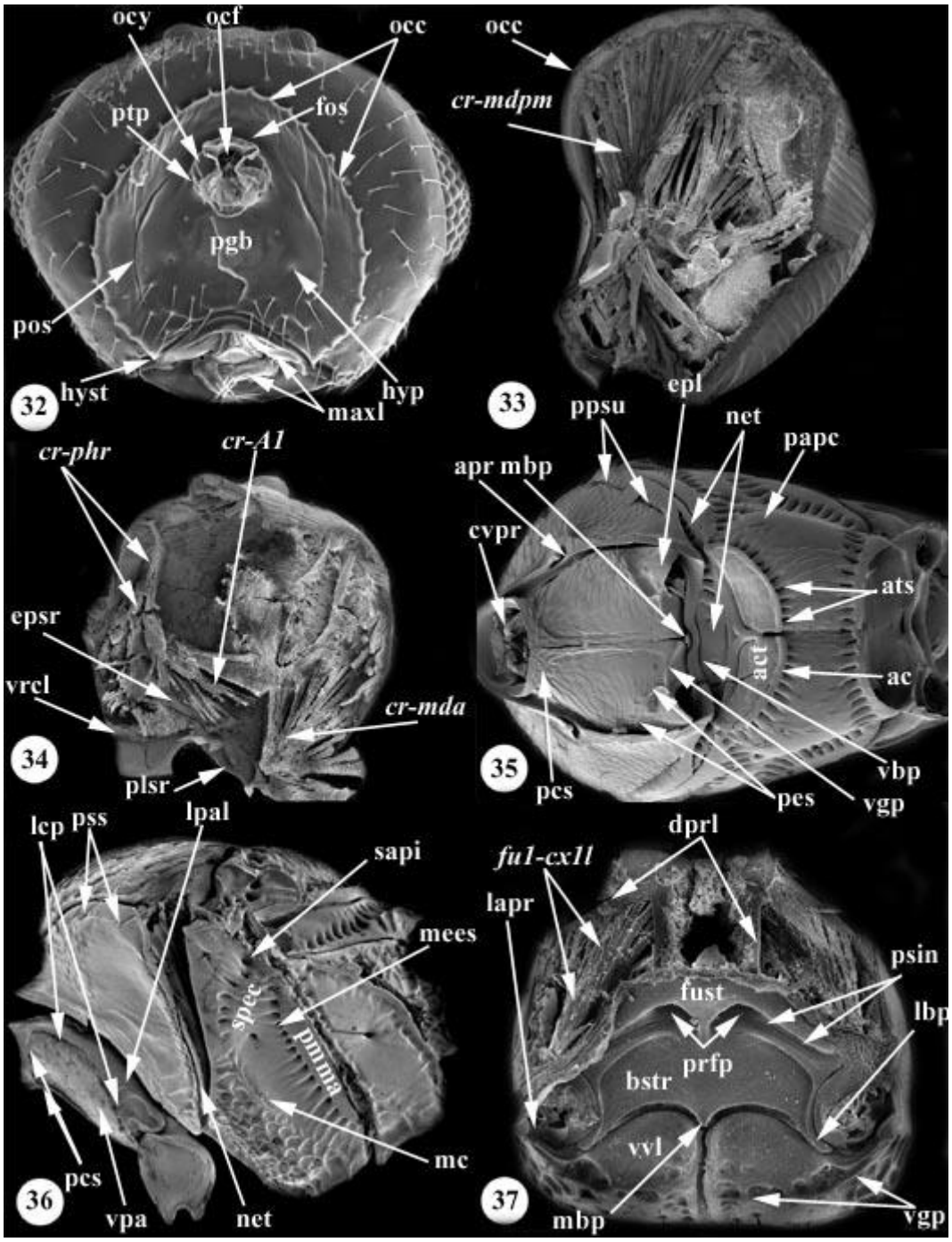
FIGURE 19. Generalized scelionid, mesosoma, lateral view.



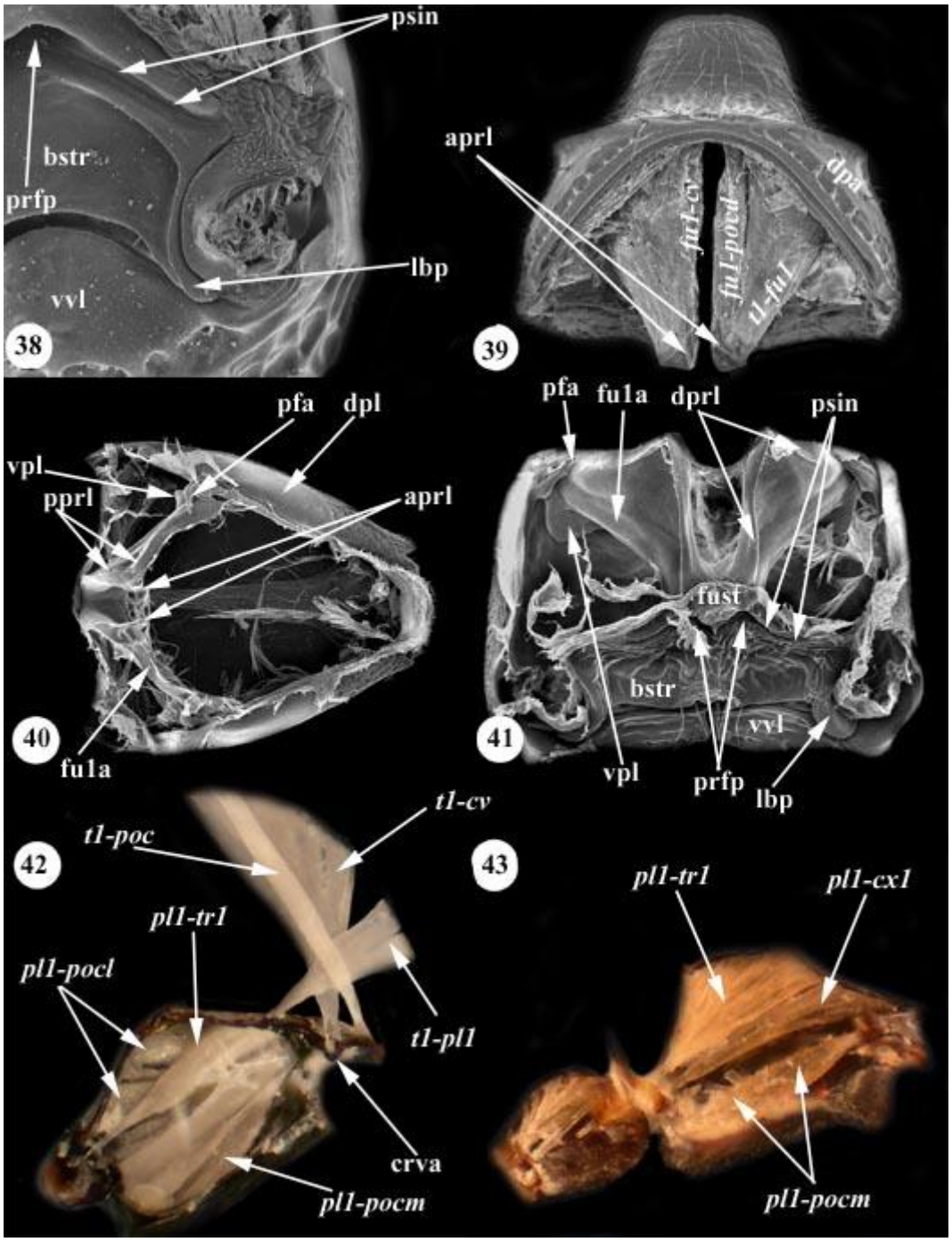
FIGURES 20-25. 20, *Gryon* sp., head, anterior view; 21, *Sparasion sp.*, head, sagittal section; 22, *Telenomus heydeni*, head, anterior view; 23, *Trimorus sp*., head, anterior view; 24, *Baryconus sp.* head anterior view; 25, *Psix sp.*, head, anterior view.



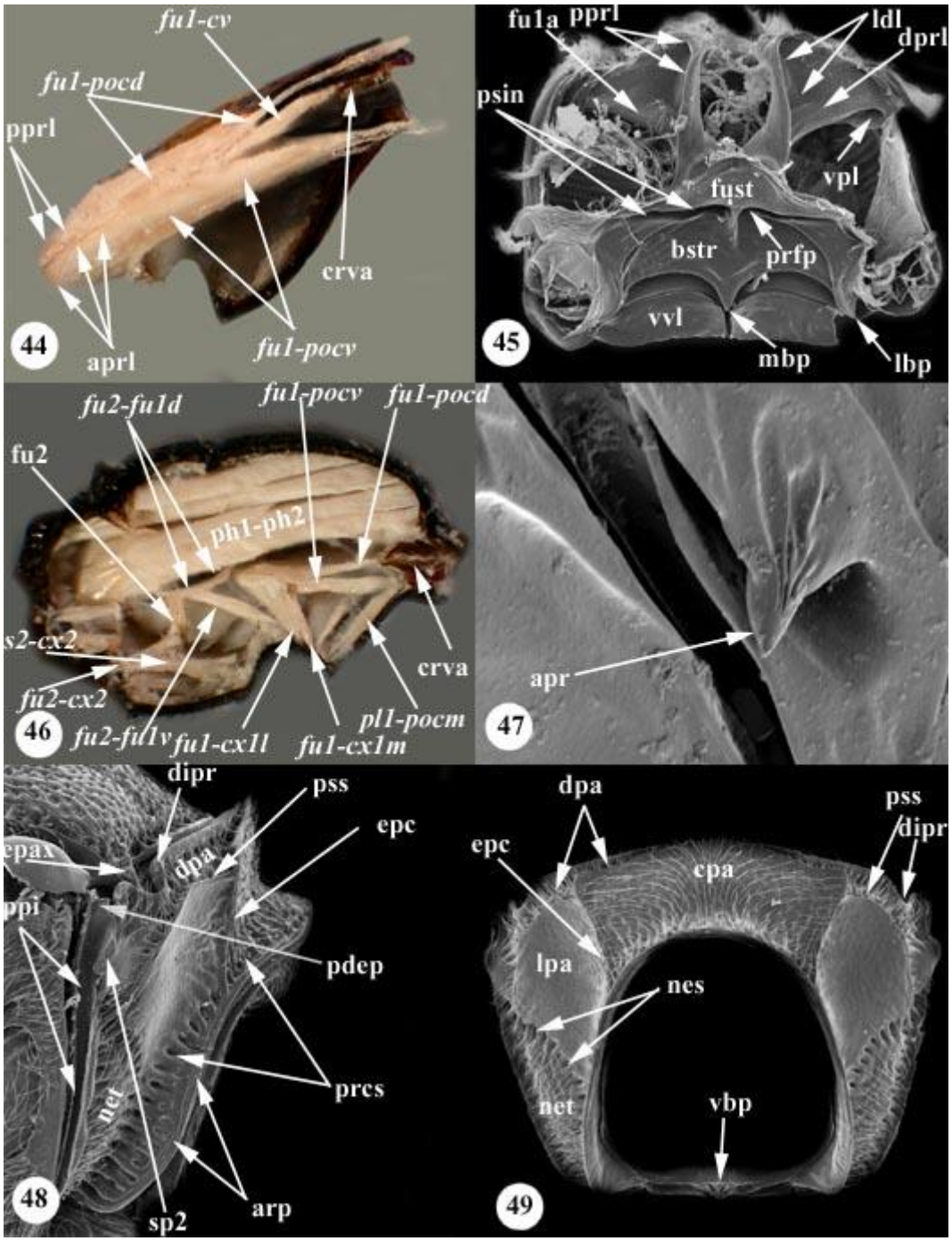
FIGURES 26-31. 26, *Trimorus bohemicus*, head, ventral view; 27, *Nixonia sp.*, head, sagittal section, anterolateral view; 28, *Sparasion sp.*, oral foramen, anteroventral view; 29, *Gryon sp.*, head, sagittal section, anterolateral view; 30, *Trimorus sp.*, head, posterior view; 31, *Telenomus heydeni*, head, posterior view.



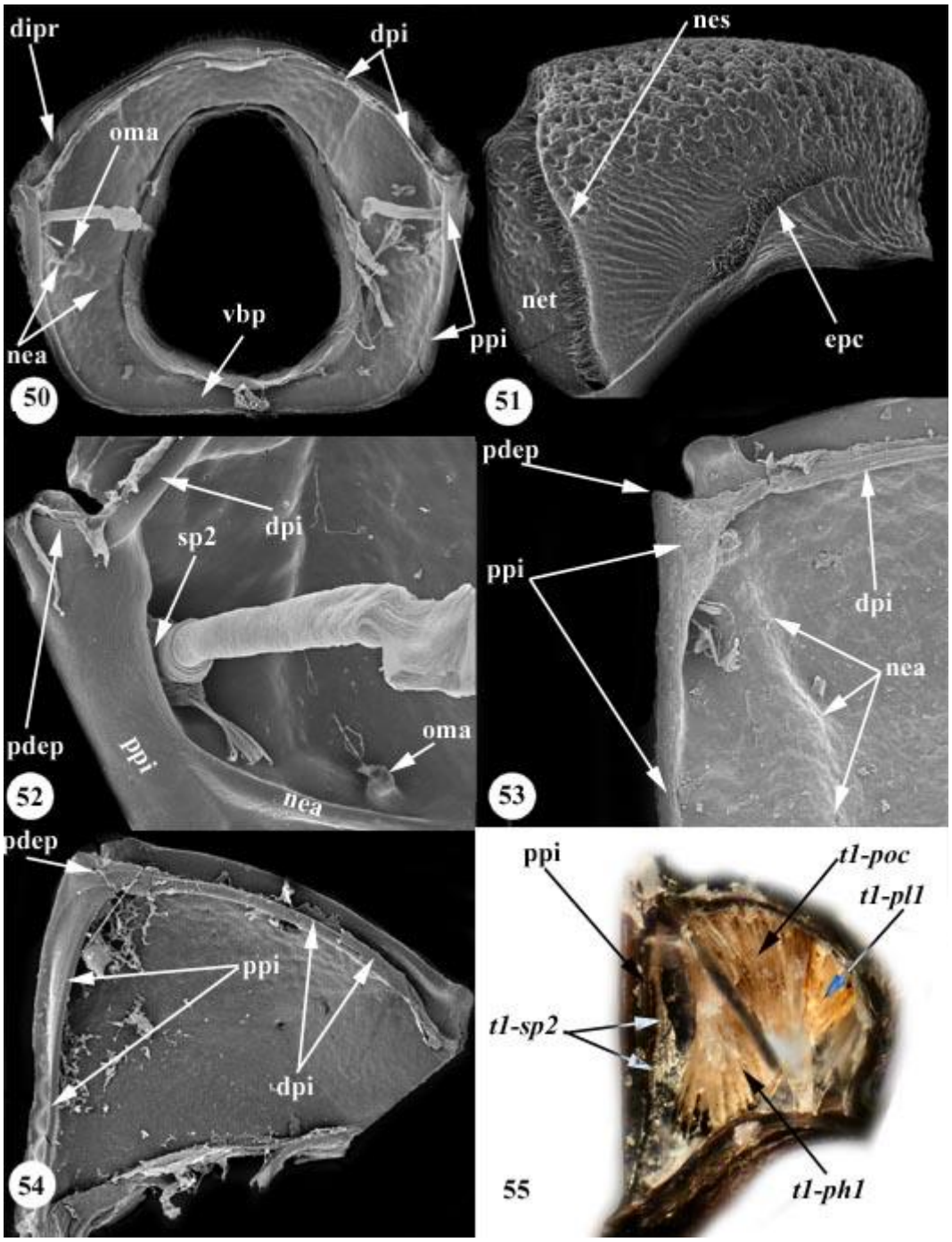
FIGURES 32-37. 32, *Trimorus sp.*, head, posterior view; 33, *Baryconus sp.*, head, sagittal section, anterolateral view; 34, *Archaeoteleia sp.*, head, transverse section, posterior view; 35, *Trimorus flavipes*, mesosoma, anteroventral view; 36, *Trimorus arenicola* mesosoma, lateral view; 37, *Scelio sp.*, propectus, ventral view.



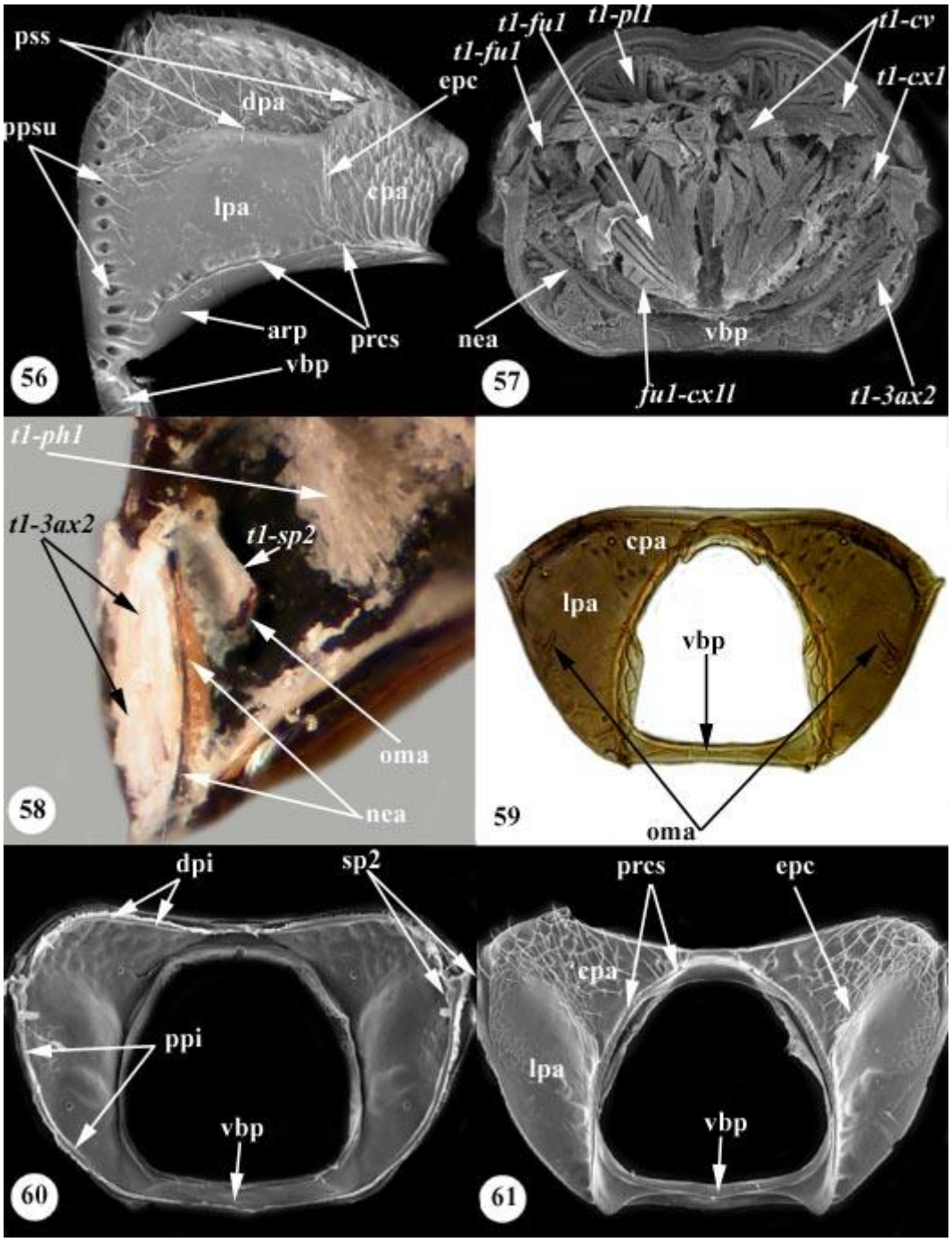
FIGURES 38-43. 38, *Scelio sp.*, propectus, posteroventral view; 39, *Scelio sp.*, propectus, dorsal view; 40, *Archaeoteleia sp.*, propectus, posterodorsal view; 41, *Archaeoteleia sp.*, propectus, posteroventral view; 42, *Telenomus sp.*, propleuron, median view; 43, *Sparasion sp.*, propleuron, median view.



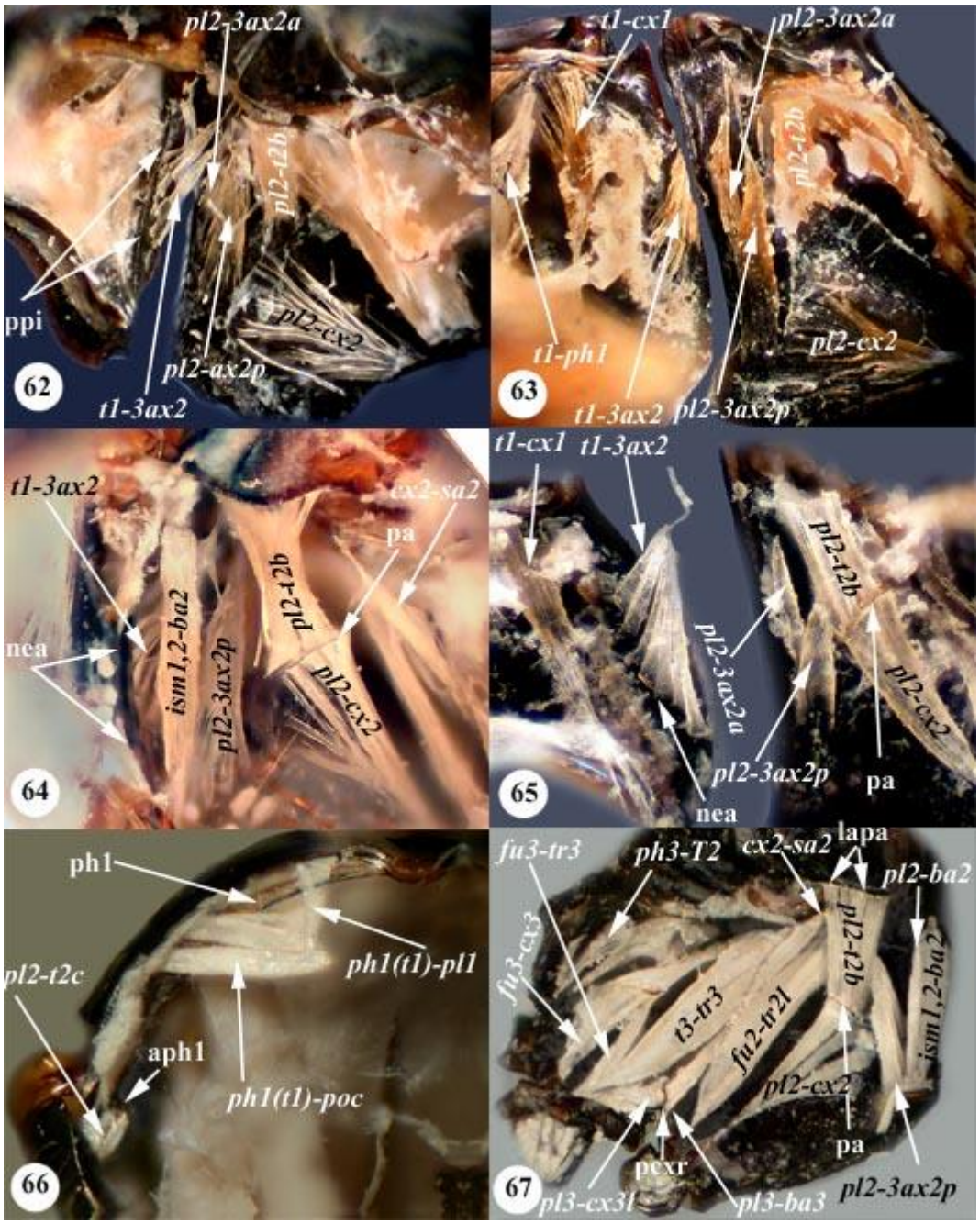
FIGURES 44-49. 44, *Scelio sp.*, propectus, median view; 45, *Telenomus sp.*, propectus, posteroventral view; 46, *Baryconus sp.*, mesosoma, sagittal section, lateral view; 47, *Trimorus flavipes*, anterior process of the pronotum, anterolateral view; 48, *Archaeoteleia sp.*, pronotum, lateral view; 49, *Archaeoteleia sp.*, pronotum, anterior view.



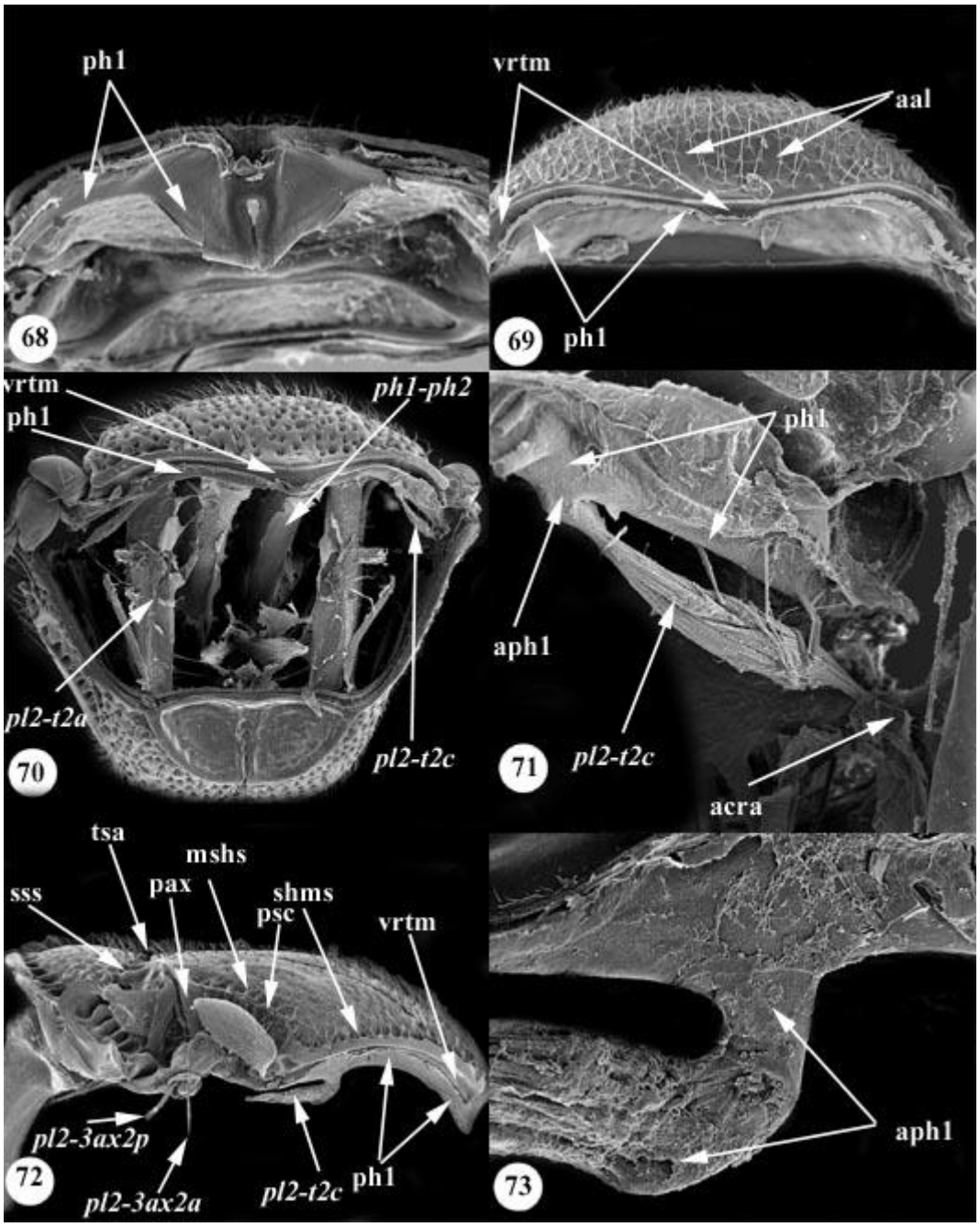
FIGURES 50-55. 50, *Archaeoteleia sp.*, pronotum, posterior view; 51, *Nixonia sp.*, pronotum lateral view; 52, *Archaeoteleia sp.*, pronotum posteromedian view; 53, *Nixonia sp.*, pronotum posteromedian view; 54, *Sparasion sp.*, pronotum, median view; 55, *Sparasion sp.*, pronotum median view.



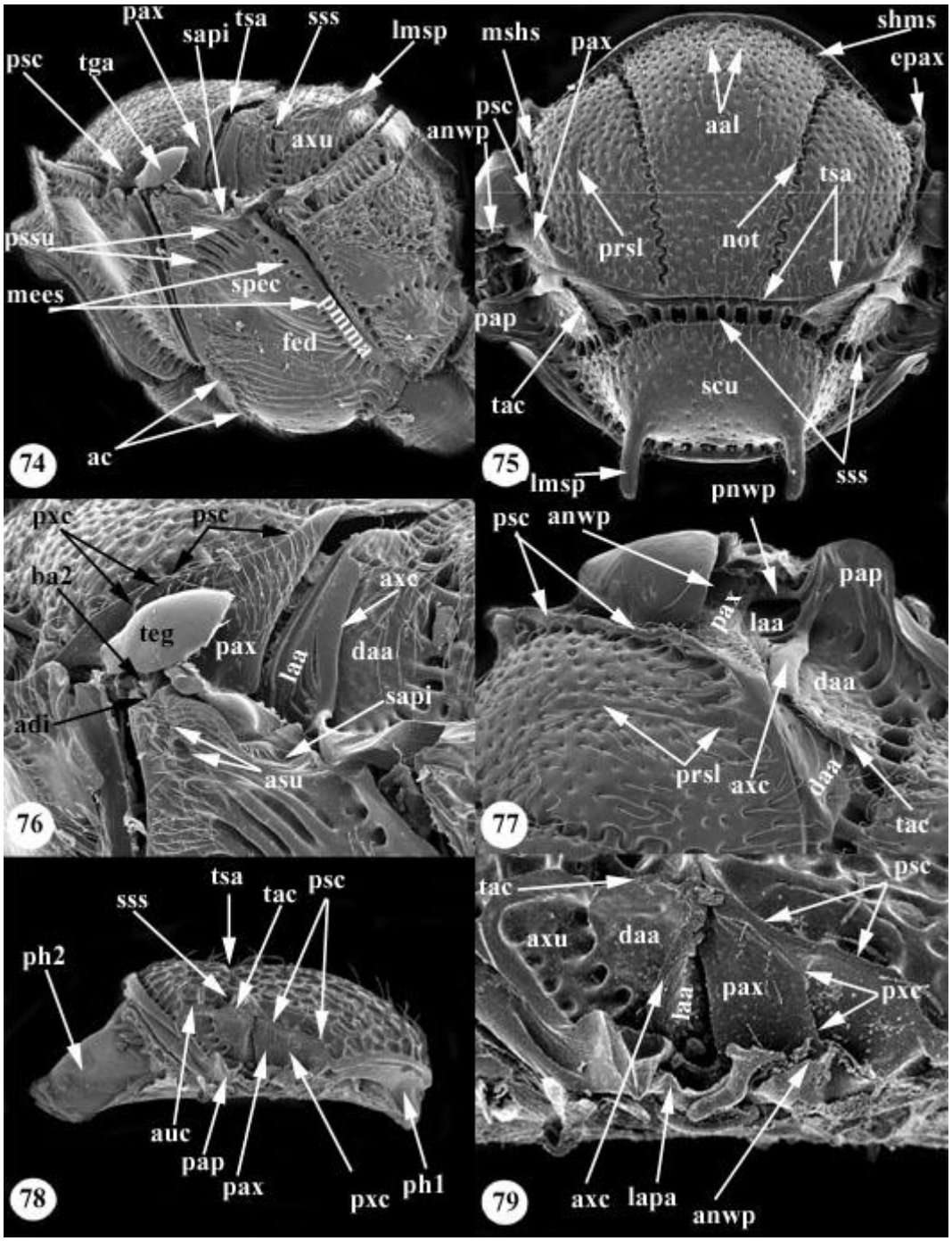
FIGURES 56-61. 56, *Sparasion sp.*, pronotum, lateral view; 57, *Scelio sp.*, propectus and pronotum posterodorsal view; 58, *Scelio sp.*, pronotum, median view; 59; *Trimorus sp.*, pronotum, anterior view; 60, *Telenomus sp.*, pronotum, posterior view; 61, *Telenomus sp.*, pronotum, anterior view.



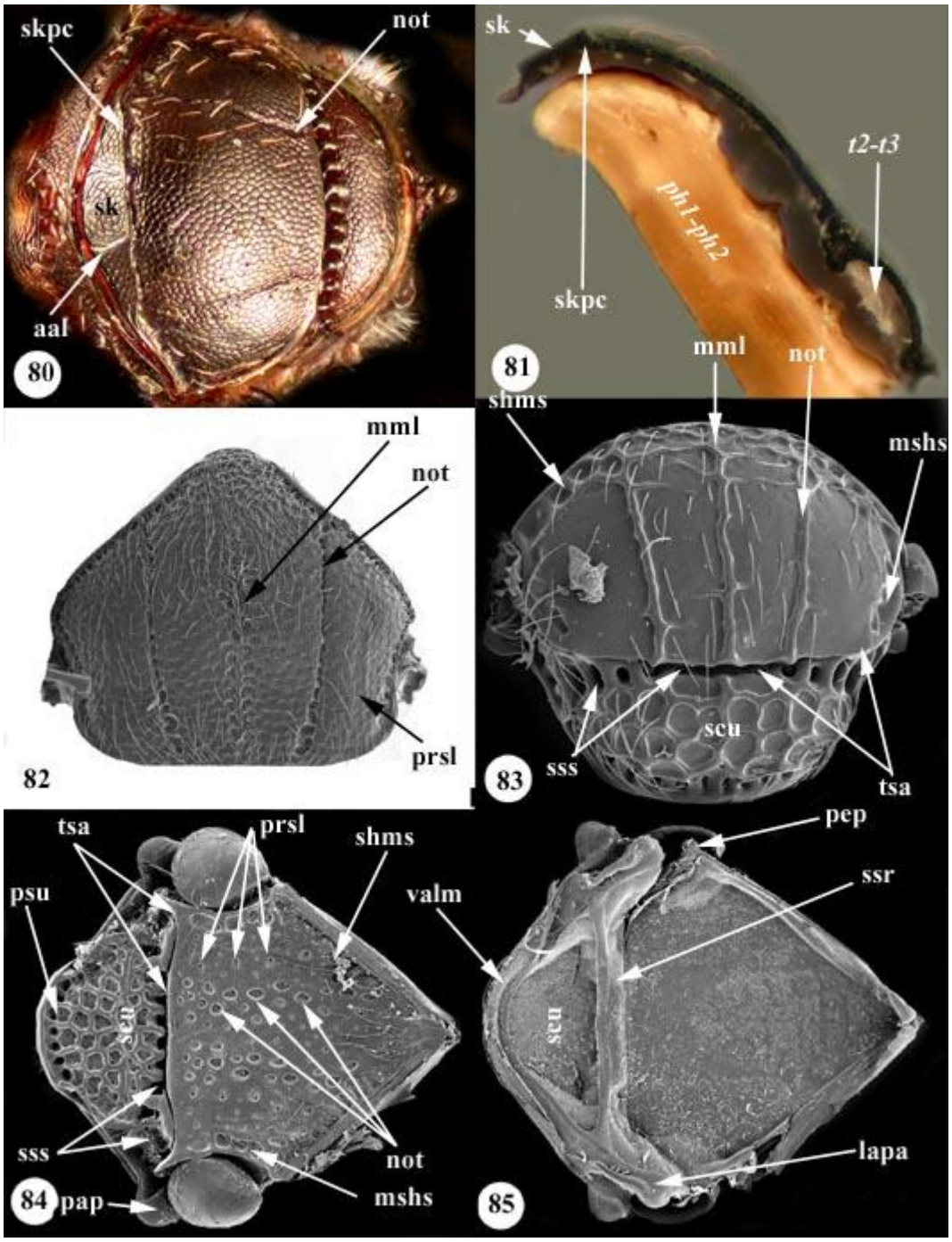
FIGURES 62-67. 62, *Sparasion sp.*, mesosoma, sagittal section, lateral view; 63, *Nixonia sp.*, mesosoma, sagittal section, lateral view; 64, *Neoscelio sp.*, mesosoma, sagittal section, lateral view; 65, *Teleas lamellatus*, mesosoma, sagittal section, lateral view; 66, *Baryconus sp.*, mesosoma, anterolateral view, pronotum and propectus removed; 67, *Baryconus sp.*, mesosoma, sagittal section, lateral view.



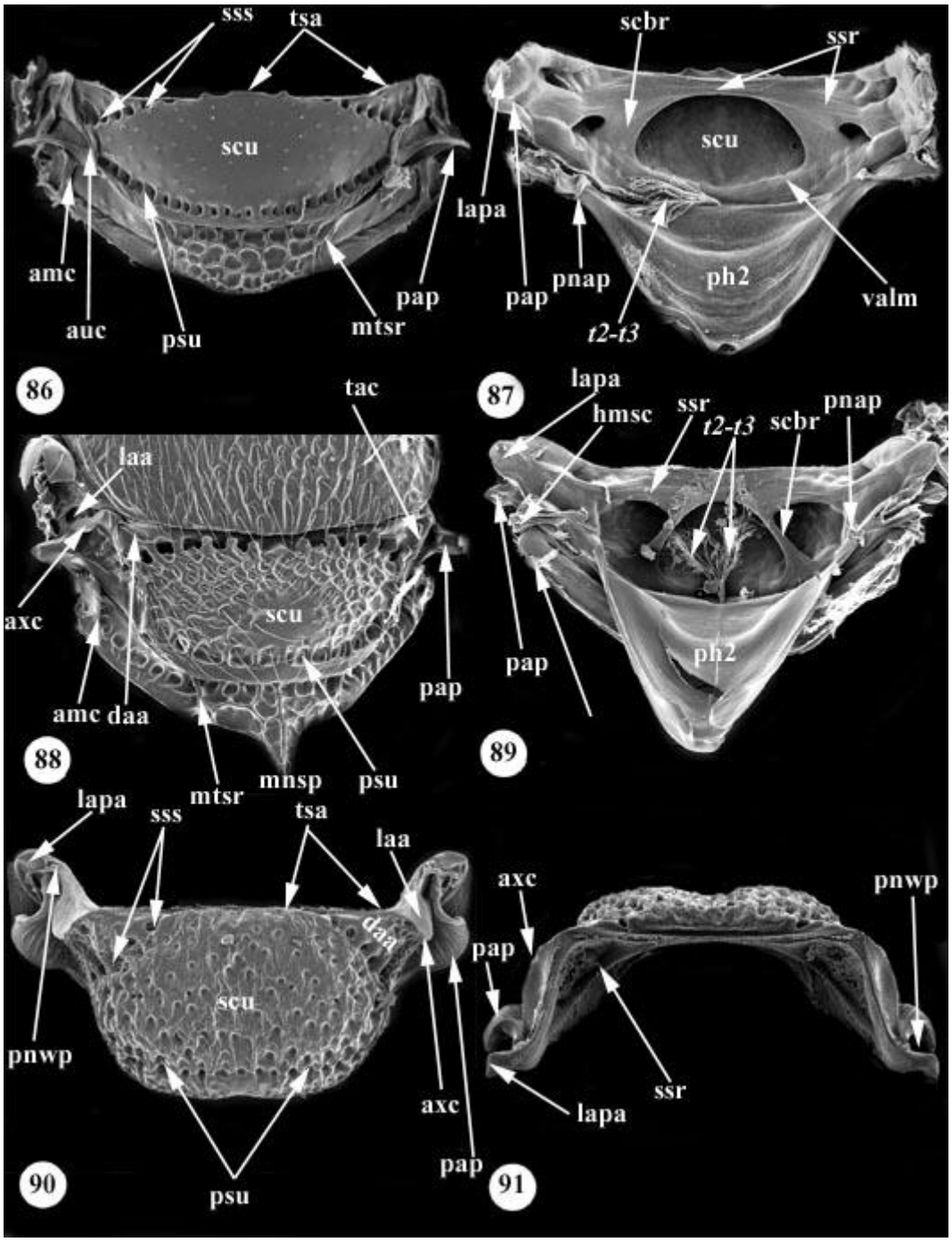
FIGURES 68-73. 68, *Sparasion sp.*, mesoscutum and first phragma, anterior view; 69, *Telenomus sp.*, mesoscutum and first phragma, anterior view; 70, *Trichoteleia sp.*, mesosoma, antero-lateral view, pronotum and propectus removed; 71, *Trichoteleia* sp., mesoscutum and mesopleuron, anteromedian view; 72, *Calliscelio sp.*, mesonotum and second phragma, lateral view; 73, *Calliscelio sp.*, ventral apodeme of the first phragma, lateral view.



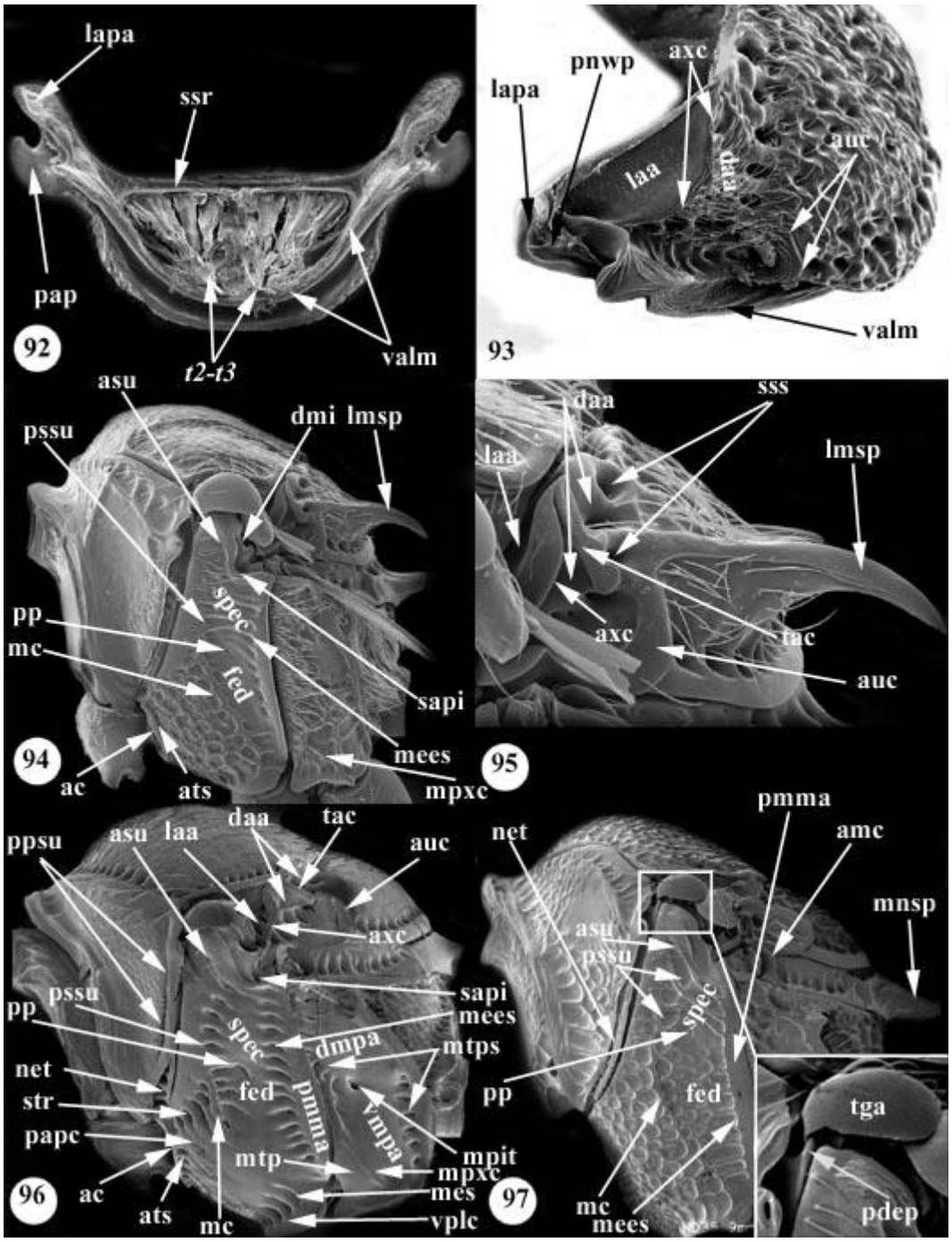
FIGURES 74-79. 74, *Archaeoteleia sp.*, mesosoma, lateral view; 75, *Archaeoteleia sp.*, mesonotum, dorsal view; 76, *Archaeoteleia sp.*, mesosoma, lateral view; 77, *Archaeoteleia sp.*, mesonotum, dorsal view; 78, *Scelio sp.*, mesonotum and second phragma lateral view; 79, *Scelio sp.*, axilla, axillula and preaxilla lateral view.



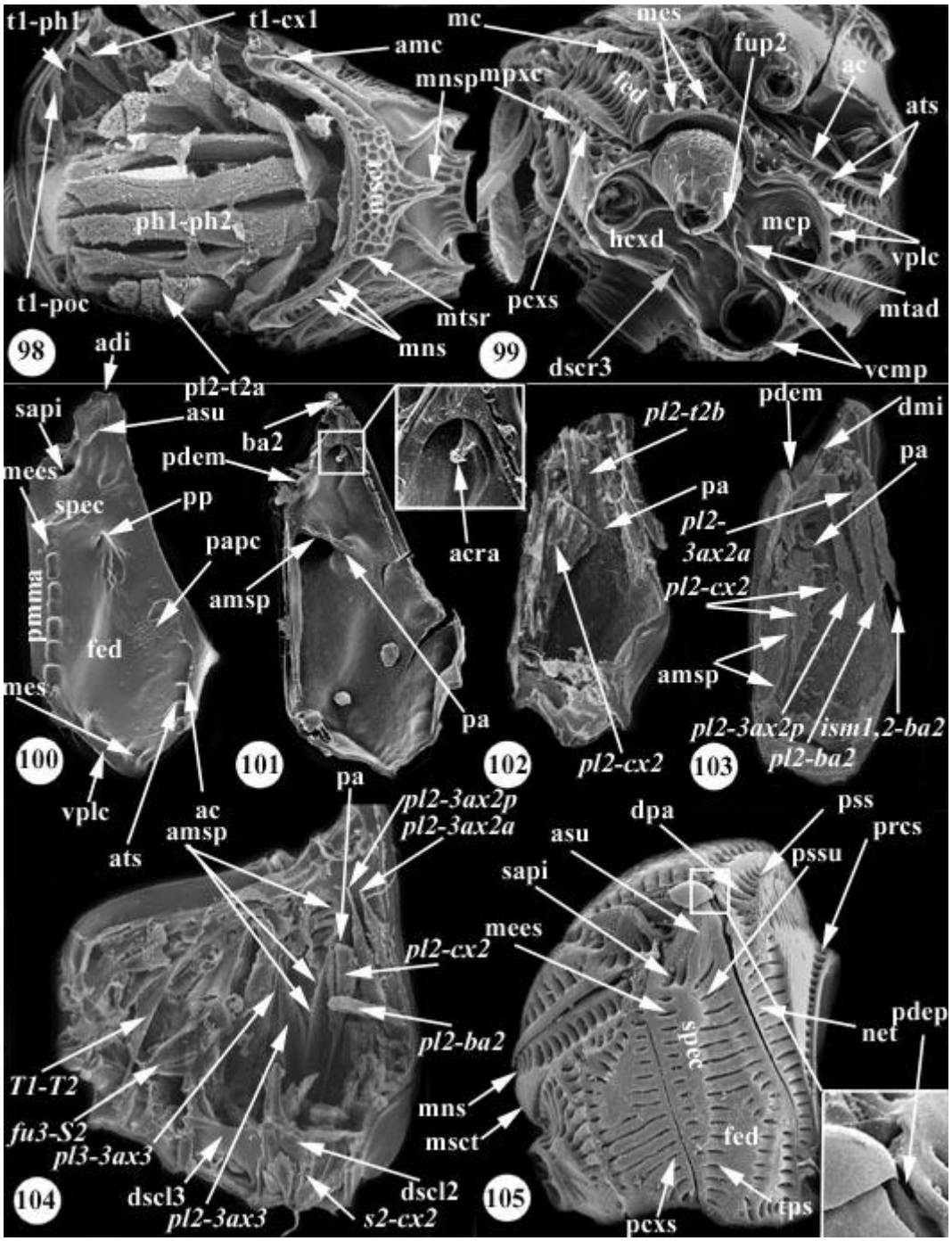
FIGURES 80-85. 80, *Psilanteris sp.*, mesosoma, dorsal view; 81, *Psilanteris sp.*, mesosoma, sagittal section, lateral view, pronotum, pro-, mesopectus, metanotum and metapectal-propodeal complex removed; 82, *Baryconus sp.*, mesonotum, dorsal view, 83, Teleasinae *n. gen.*, mesonotum, dorsal view; 84, *Sparasion sp.*, mesonotum, dorsal view; 85, *Sparasion sp.*, mesonotum, ventral view.



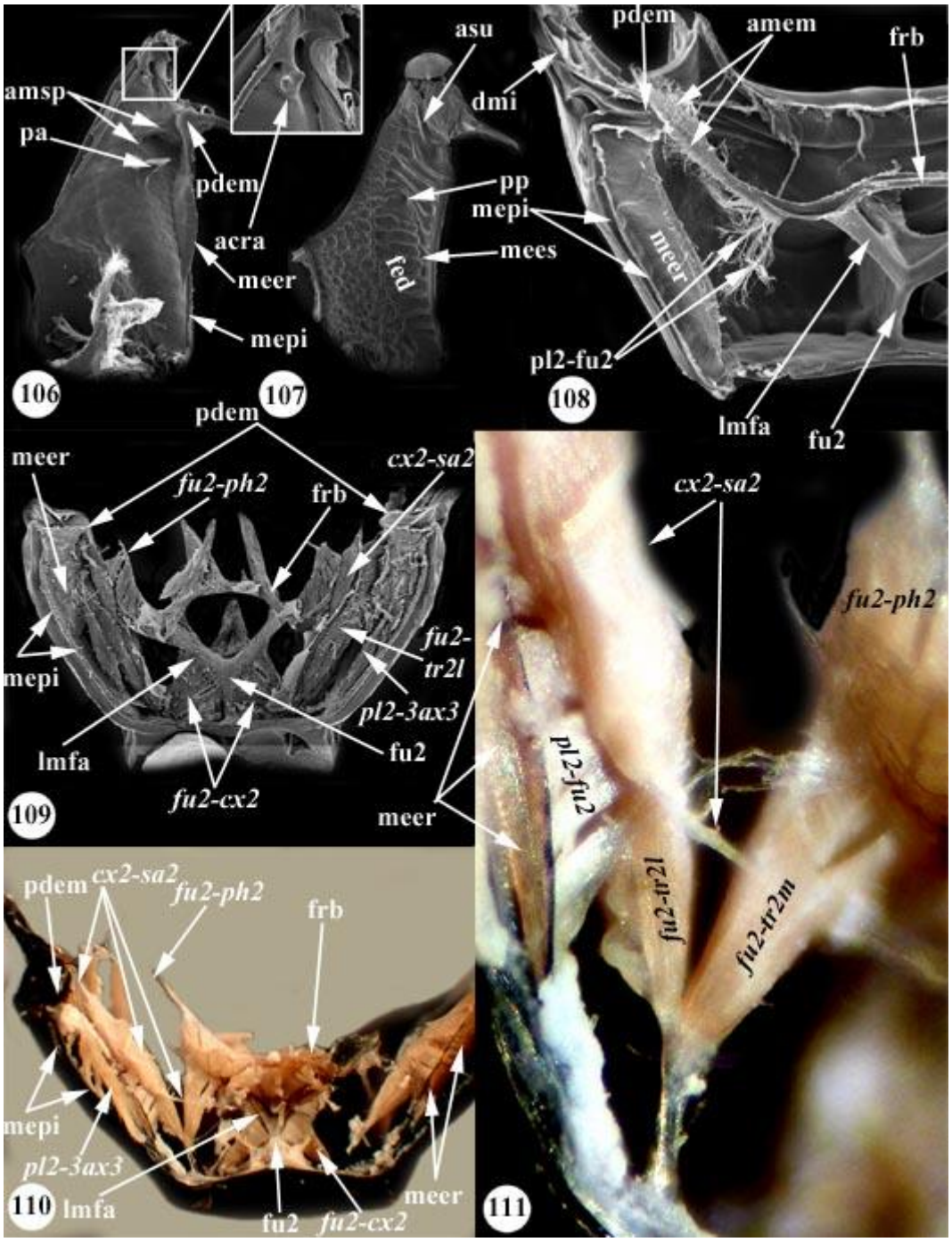
FIGURES 86-91, 86, *Telenomus sp.*, mesoscutellum, dorsal view; 87, *Telenomus sp.*, mesoscutellum, ventral view; 88, *Trimorus sp.*, mesoscutellum, dorsal view; 89, *Trimorus sp.*, mesoscutellum, ventral view; 90, *Nixonia sp.*, mesoscutellum, dorsal view; 91, *Nixonia sp.*, mesoscutellum, anterior view.



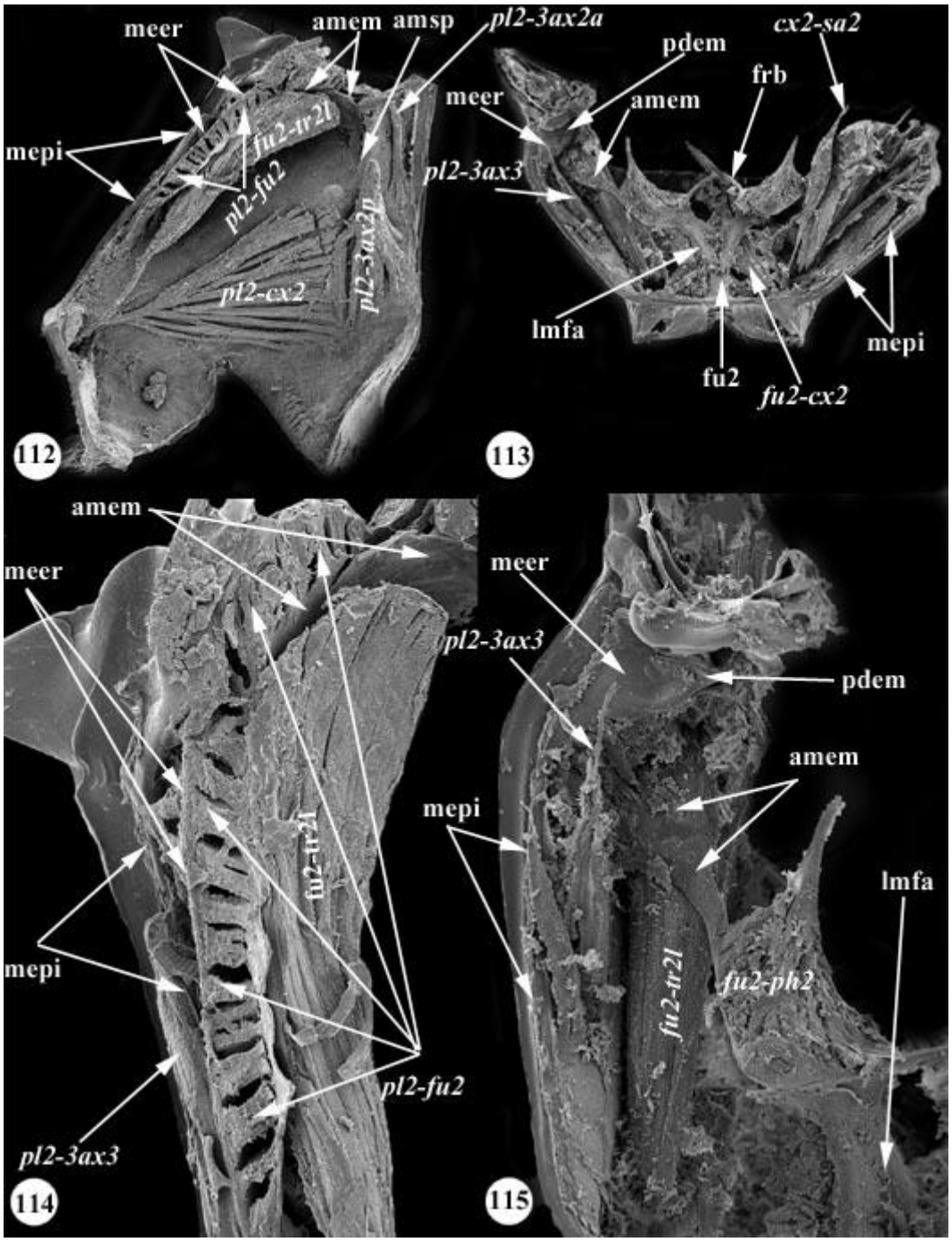
FIGURES 92-97. 92, *Nixonia sp.*, mesoscutellum, ventral view; 93, *Nixonia sp.*, mesoscutellum, dorsolateral view; 94, *Gryonoides sp.*, mesosoma, lateral view; 95, *Gryonoides sp.*, mesoscutellum, lateral view; 96, *Trimorus flavipes*, mesosoma, lateral view; 97, *Trimorus puncticollis*, mesosoma, lateral view.



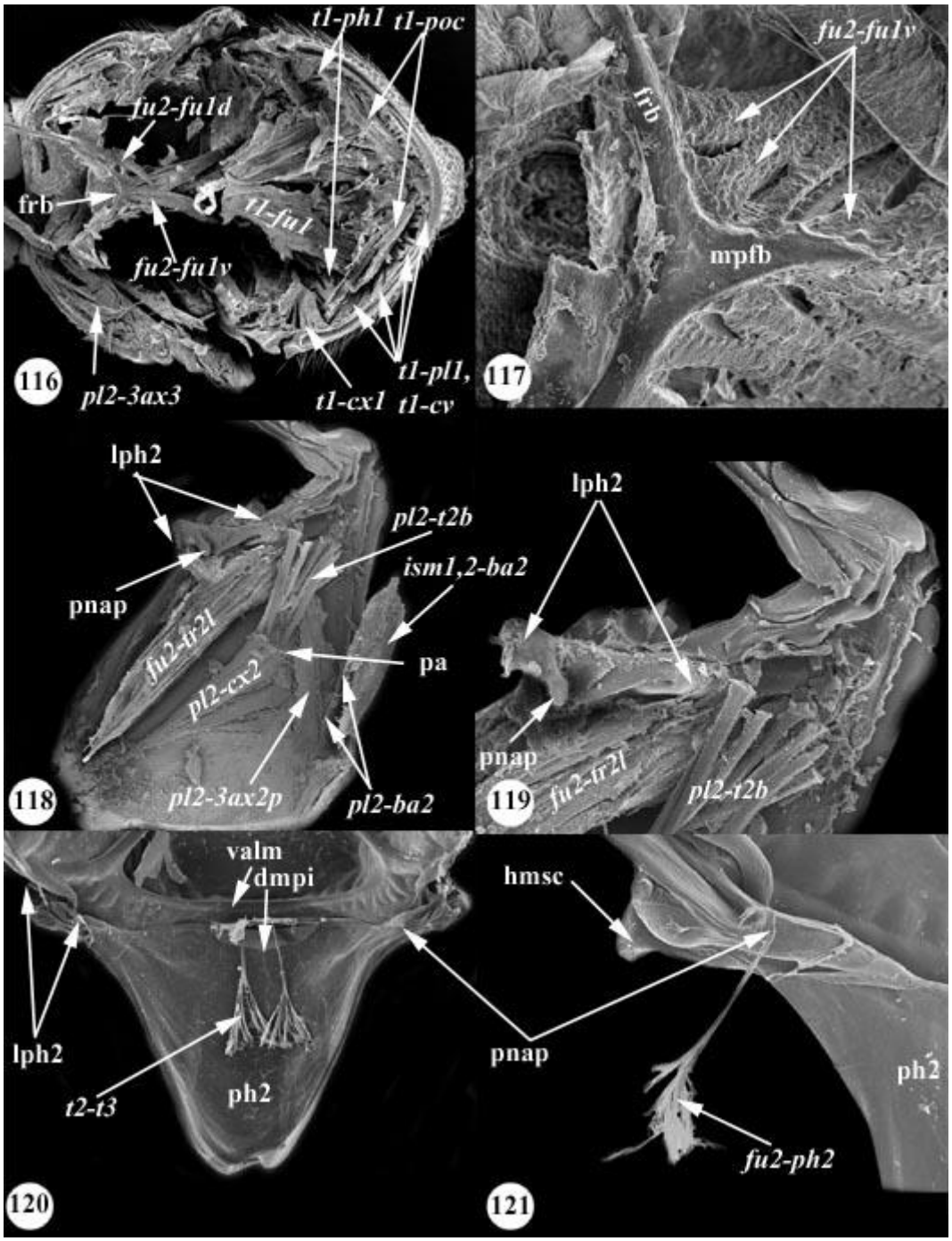
FIGURES 98-105. 98, *Trimorus sp.*, mesosoma, dorsal view, mesonotum removed; 99, *Trimorus hungaricus*, mesosoma, ventral view; 100, *Telenomus sp.*, mesopectus, lateral view; 101, *Telenomus sp.*, mesopectus, median view; 102, *Trissolcus sp.*, mesopectus, median view; 103, *Psix sp.*, mesopectus, median view; 104, *Paratelenomus sp.*, mesosoma, median view; 104, *Paratelenomus sp.*, mesosoma lateral view.



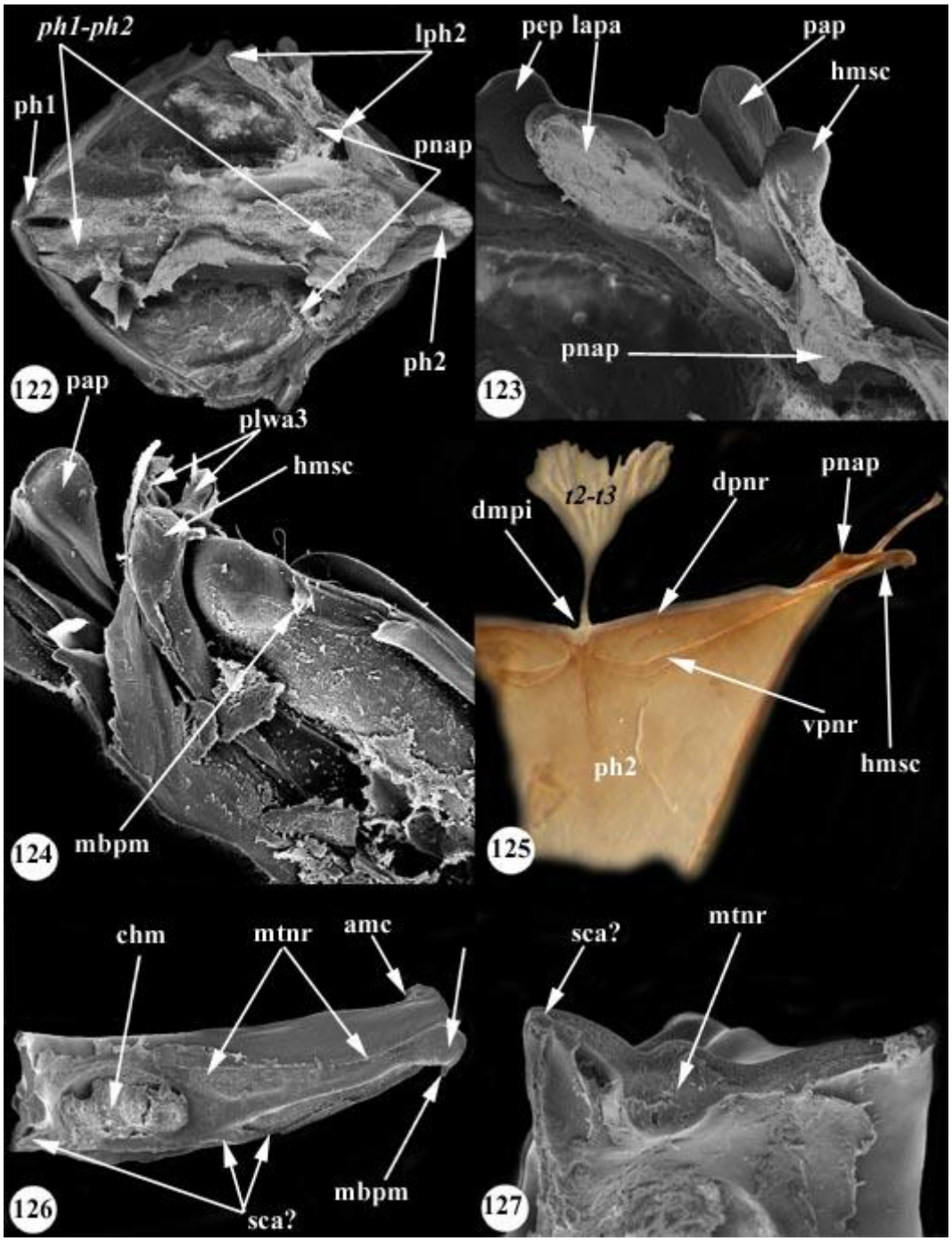
FIGURES 106-111. 106, *Trimorus varicornis*, mesopleuron median view; 107, *Trimorus varicornis*, mesopleuron lateral view; 108, *Archaeoteleia sp.*, mesopectus, posterior view, mesonotum, metanotum, mesopostnotum and metapectal-propodeal complex removed; 109, *Baryconus sp.*, mesopectus, posterior view, mesonotum, metanotum, mesopostnotum and metapectal-propodeal complex removed; 110, *Nixonia sp.*, mesopectus, posterior view, mesonotum, metanotum, mesopostnotum and metapectal-propodeal complex removed; 111, *Nixonia sp.*, mesopectus, posterior view, mesonotum, metanotum, mesopostnotum and metapectal-propodeal complex removed.



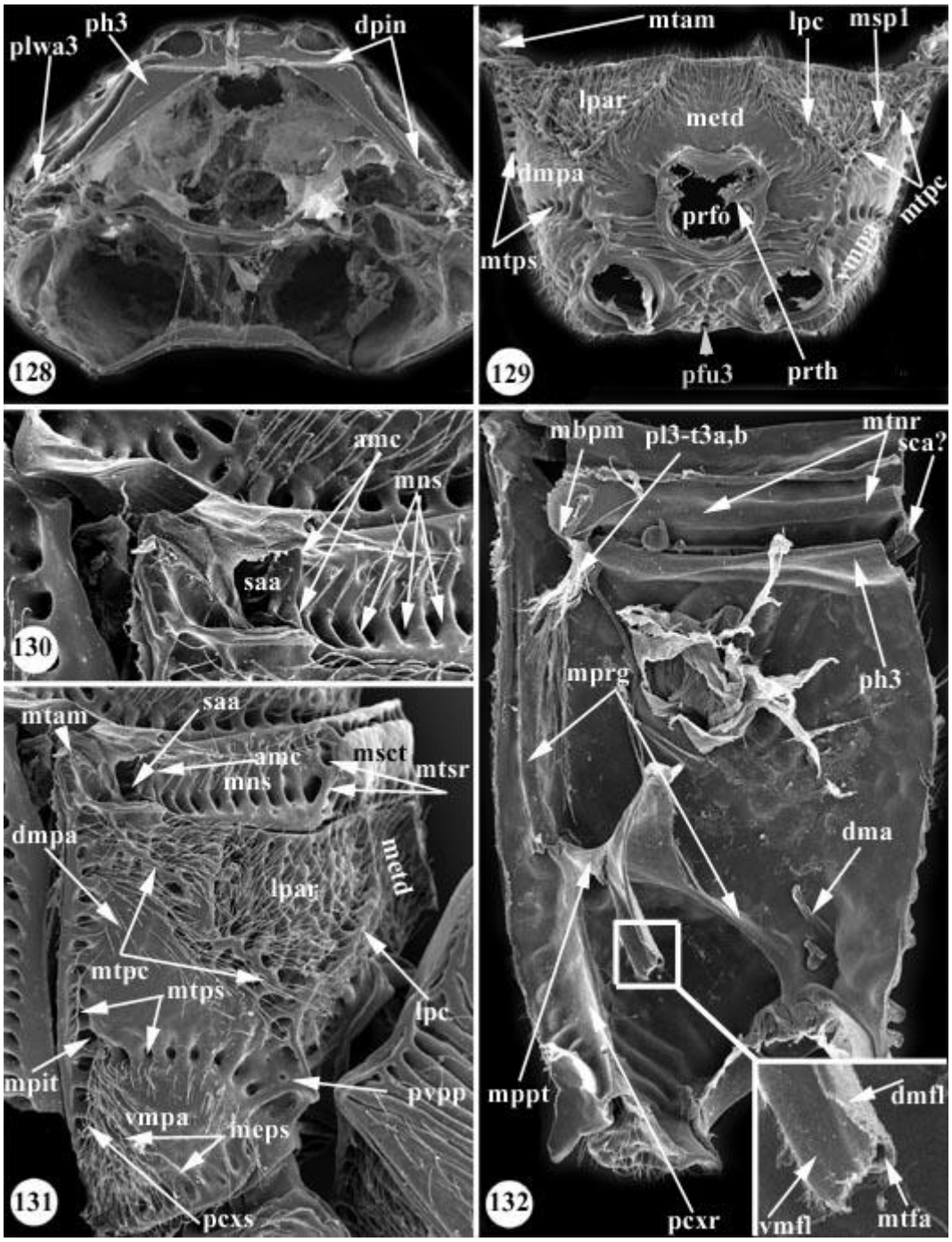
FIGURES 112-115. 112, 114, *Sparasion sp.*, mesopleuron, median view; 113, 115, *Scelio sp.*, mesopectus, posterior view, mesonotum, metanotum, mesopostnotum and metapectal-propodeal complex removed.



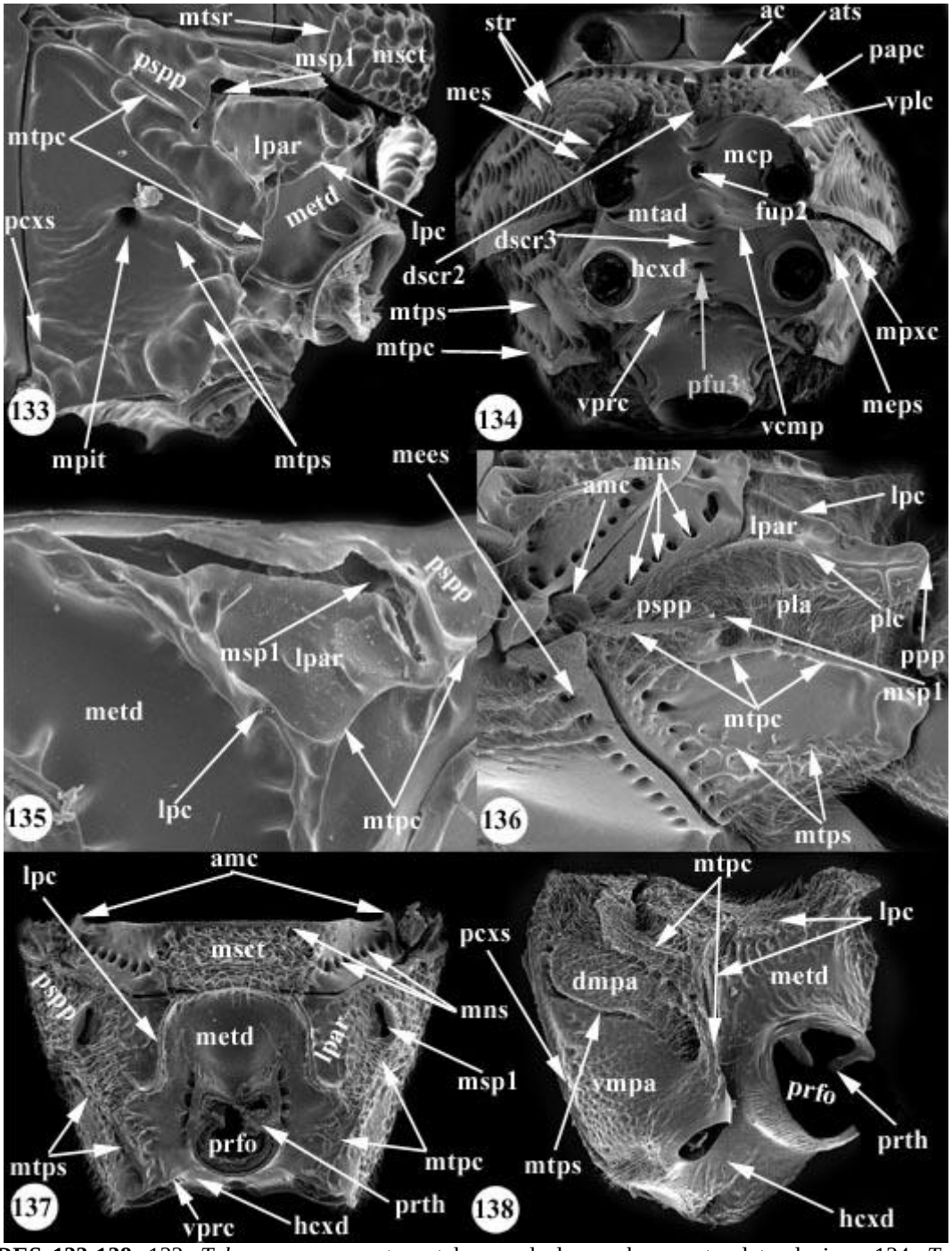
FIGURES 116-121. 116, *Calliscelio sp.*, mesosoma, dorsal view, mesonotum, metanotum, mesopostnotum and metapectal-propodeal complex removed; 117, *Calliscelio sp.*, anterior process of the mesofurcal bridge with ventral mesofurco-profurcal muscle, dorsal view; 118, Scelio sp., mesopleuron and mesolaterophragma, median view; 119, *Scelio sp.*, mesolaterophragma, median view; 120, *Archaeoteleia sp.*, mesoscutellum and mesopostnotum with second phragma, anteroventral view; 121, *Archaeoteleia sp.*, mesolaterophragma, and humeral sclerite, anteroventral view.



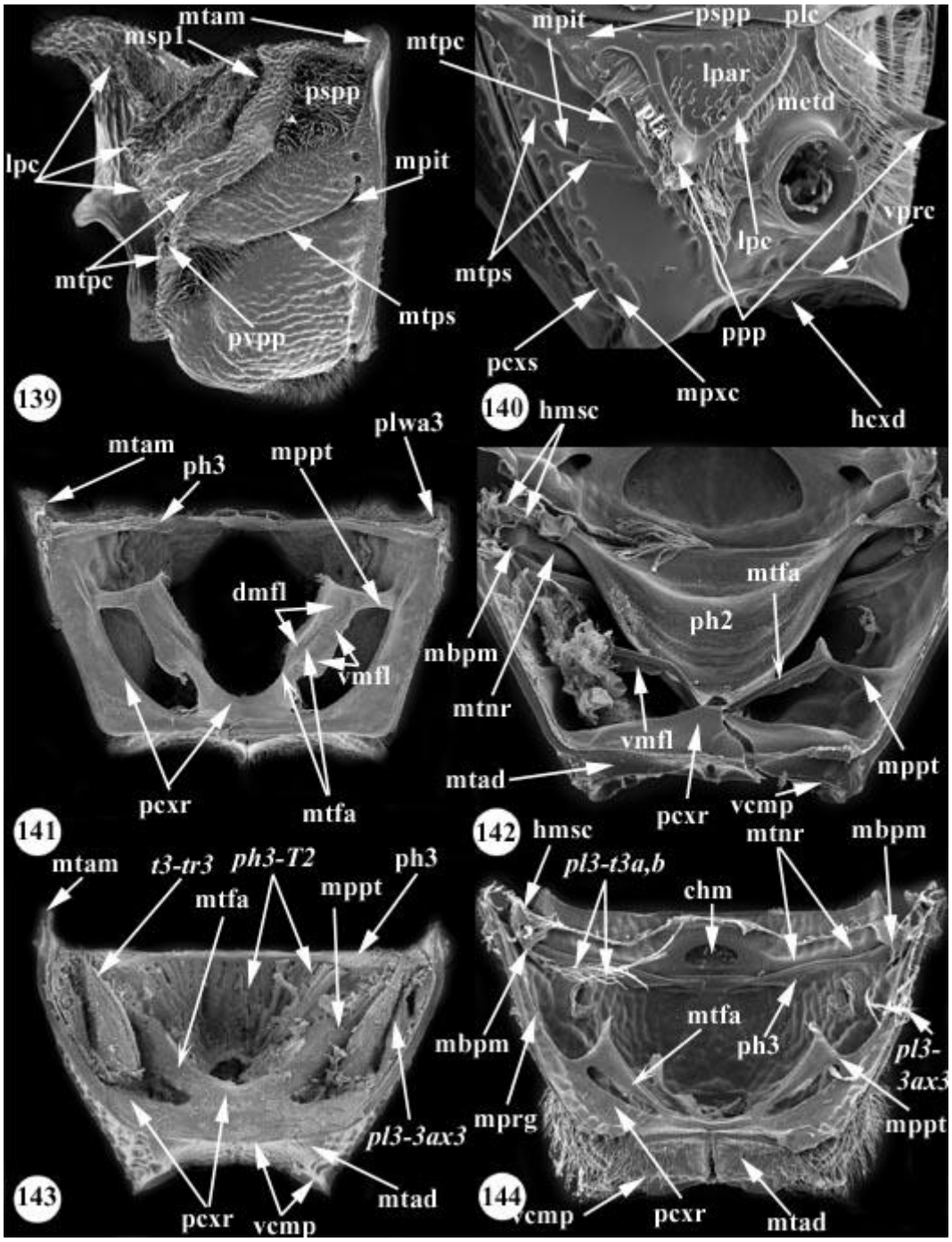
FIGURES 122-127. 122, *Scelio sp.*, mesonotum and mesopostnotum with second phragma, ventral view; 123, *Scelio sp.* mesonotum, mesolaterophragma and humeral sclerite, ventral view; 124, *Baryconus sp.*, mesonotum, mesolaterophragma, humeral sclerite and metanotum, ventral view; 125, *Trimorus sp.*, mesopostnotum with second phragma and humeral sclerite, anterior view; 126, *Sparasion sp.*, metanotum, anterolateral view; 127, *Sparasion sp.*, submedian sagittal section of metanotum, lateral view.



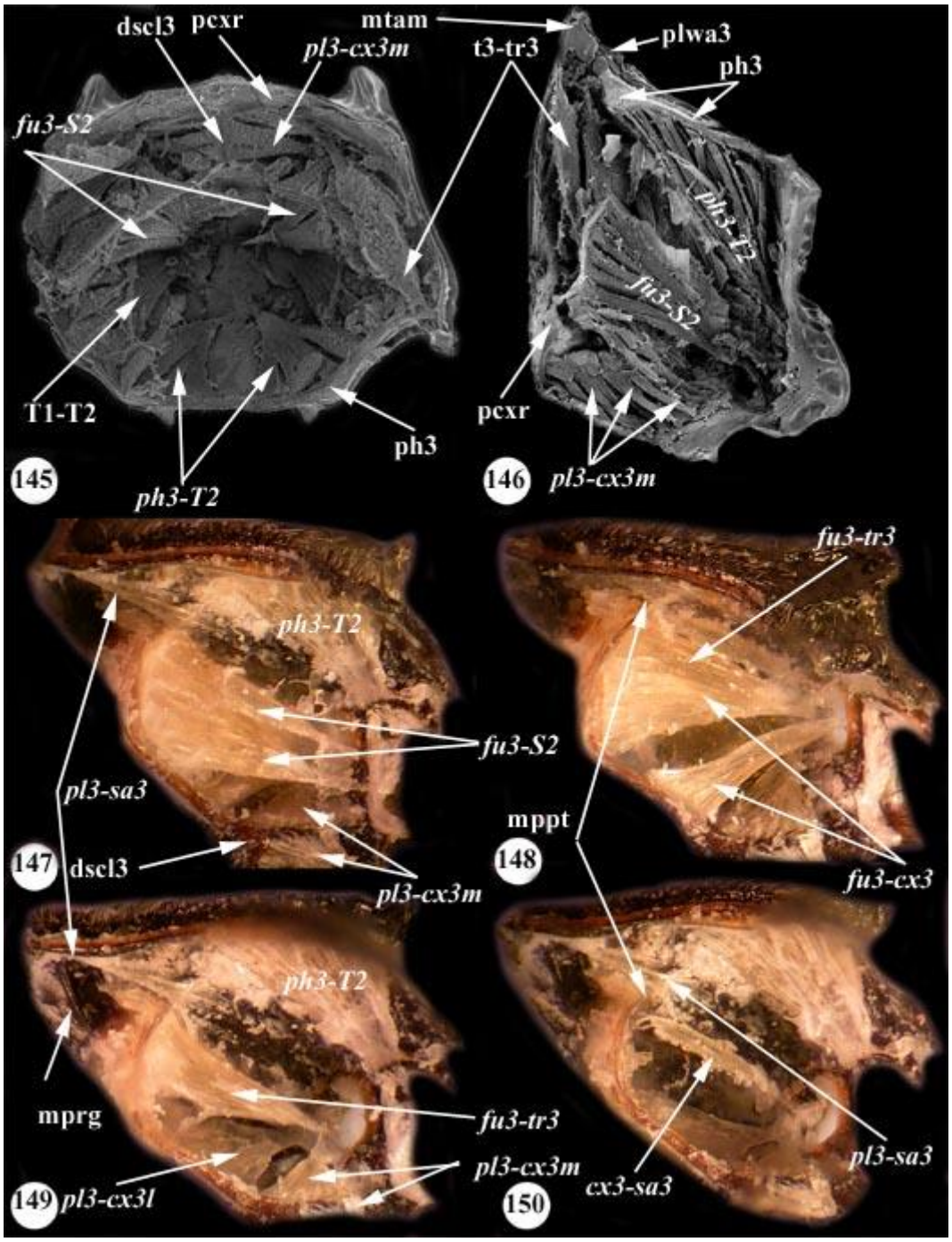
FIGURES 128-132. 128, *Telenomus sp.*, metapectal-propodeal complex, dorsal view; 129-132, *Archaeoteleia sp.*; 129, metapectal-propodeal complex, posterior view; 130, metanotum and metapleural arm, lateral view; 131, metapectal-propodeal complex, lateral view; 132, metapectal-propodeal complex and metanotum, median view.



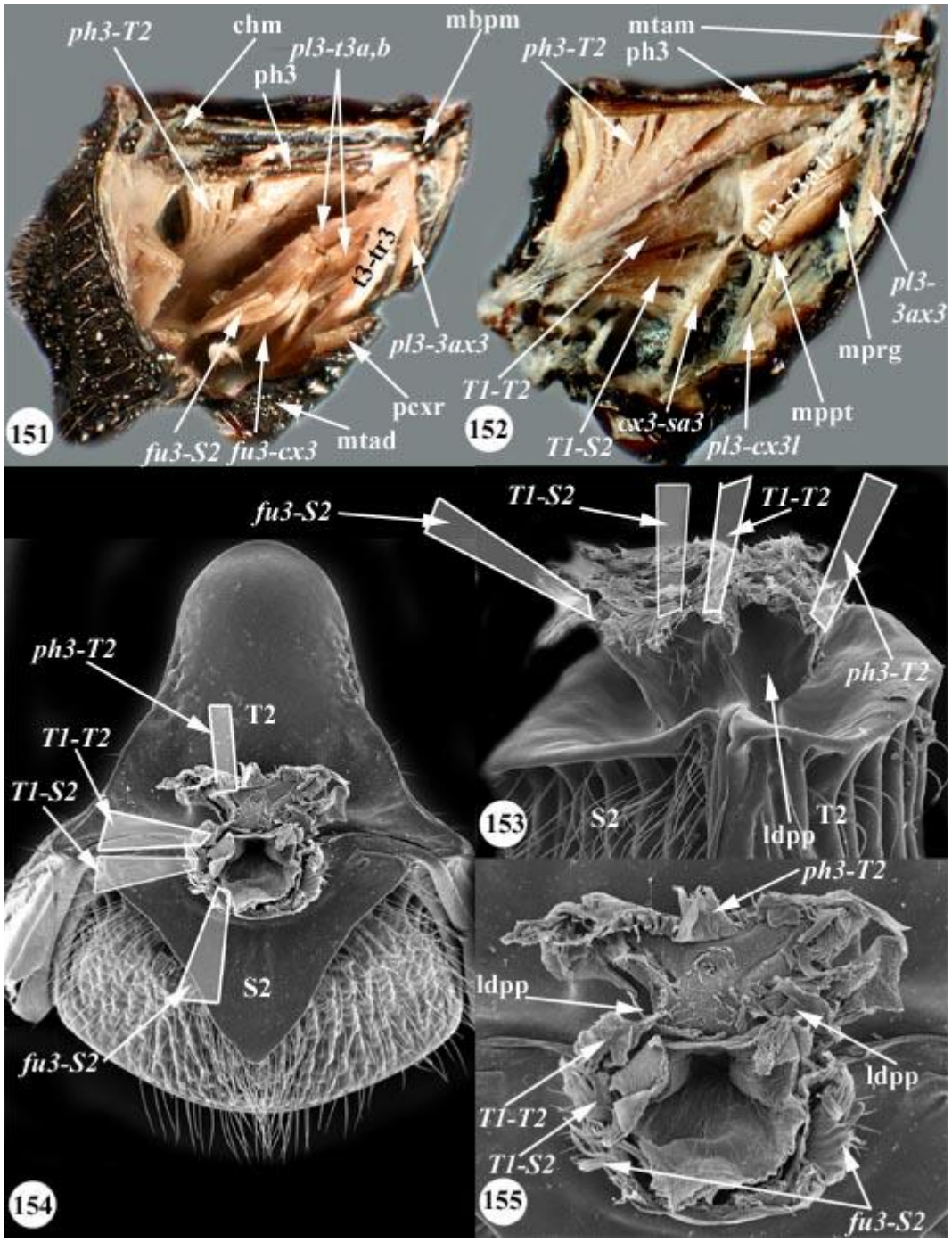
FIGURES 133-138. 133, *Telenomus sp.*, metapectal-propodeal complex, posterolateral view; 134, *Trimorus opacus*, mesosoma, ventral view; 135, *Telenomus sp.*, metapectal-propodeal complex posterior view; 136, *Sparasion sp.*, metapectal-propodeal complex, metanotum, mesonotum and mesopleuron, lateral view; 137, *Calliscelio sp.*, metapectal-propodeal complex and metanotum; posterior view; 138, *Nixonia sp.*, metapectal-propodeal complex, posterolateral view.



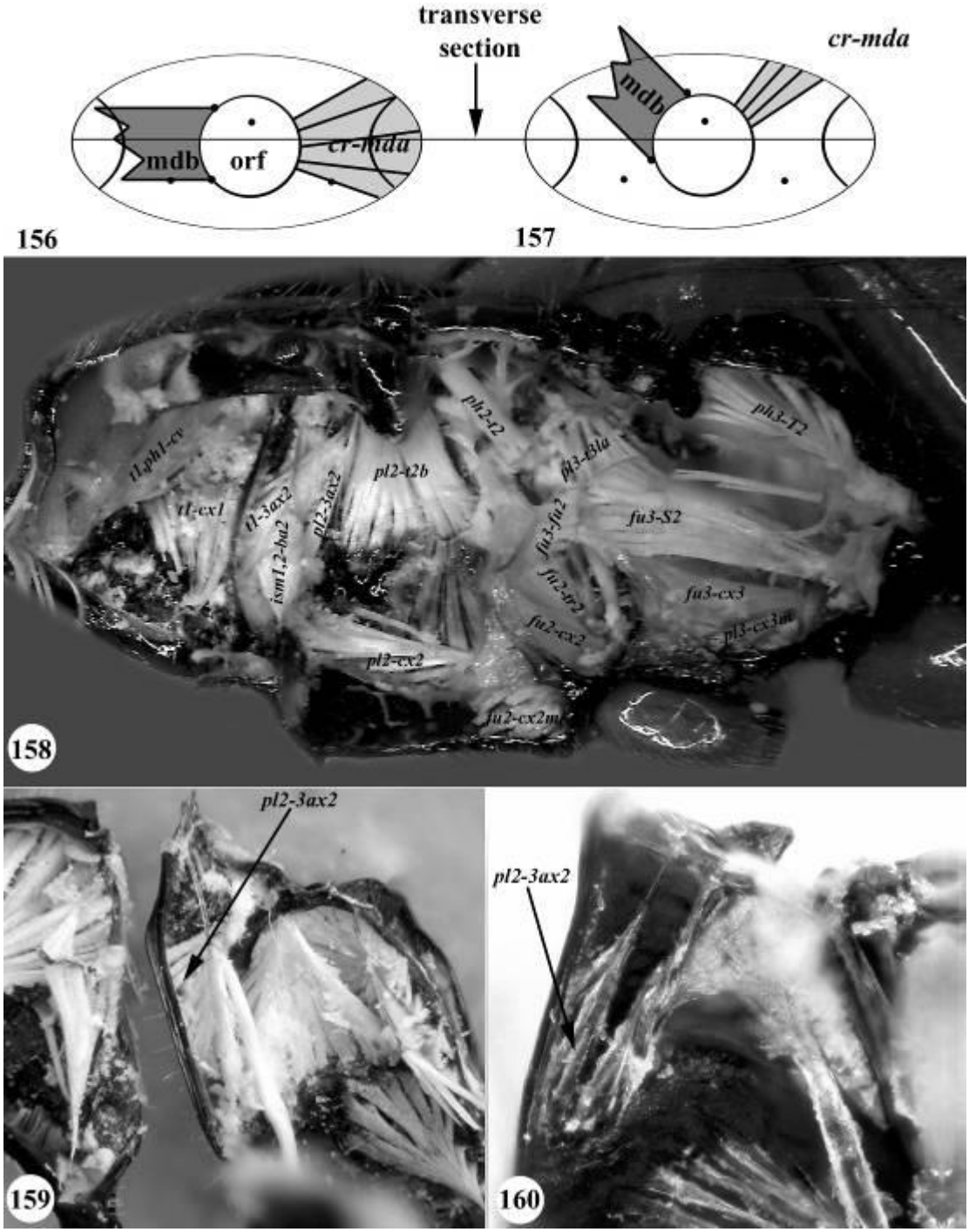
FIGURES 139-144. 139, *Nixonia sp.*, metapectal-propodeal complex, lateral view; 140, *Trimorus sp.*, metapectal-propodeal complex, lateral view; 141, *Sparasion sp.*, metapectal-propodeal complex, anterior view; 142, *Telenomus sp.*, metapectal-propodeal complex, second phragma and mesoscutellum, anterior view; 143, *Scelio sp.*, metapectal-propodeal complex, anterior view; 144, *Archaeoteleia sp.*, metapectal-propodeal complex, anterior view.



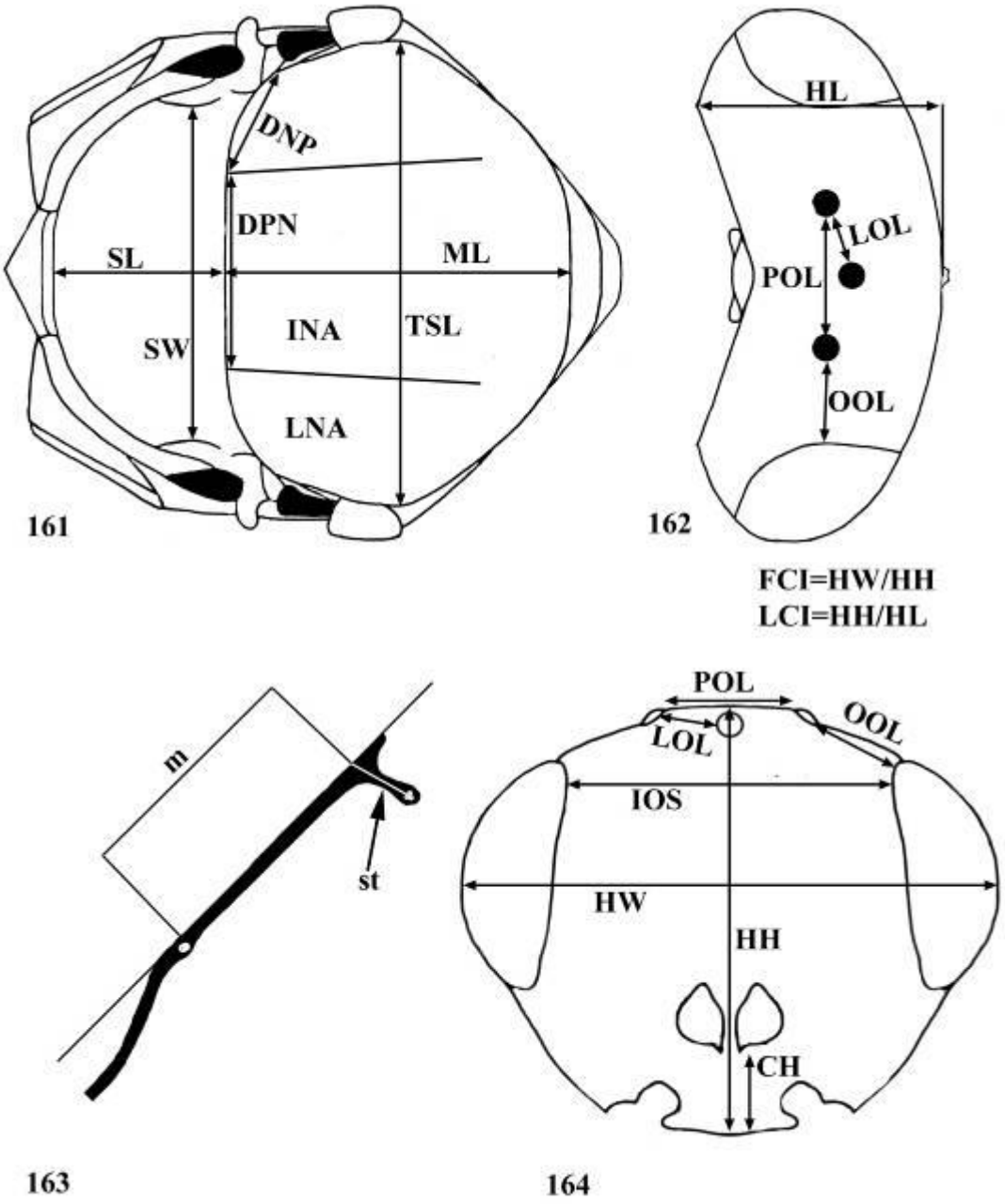
FIGURES 145-150. 145, *Idris sp.*, metapectal-propodeal complex, dorsal view; 146, *Scelio sp.*, metapectal-propodeal complex median view; 147-150, *Sparasion sp.*, metapectal-propodeal complex median view.



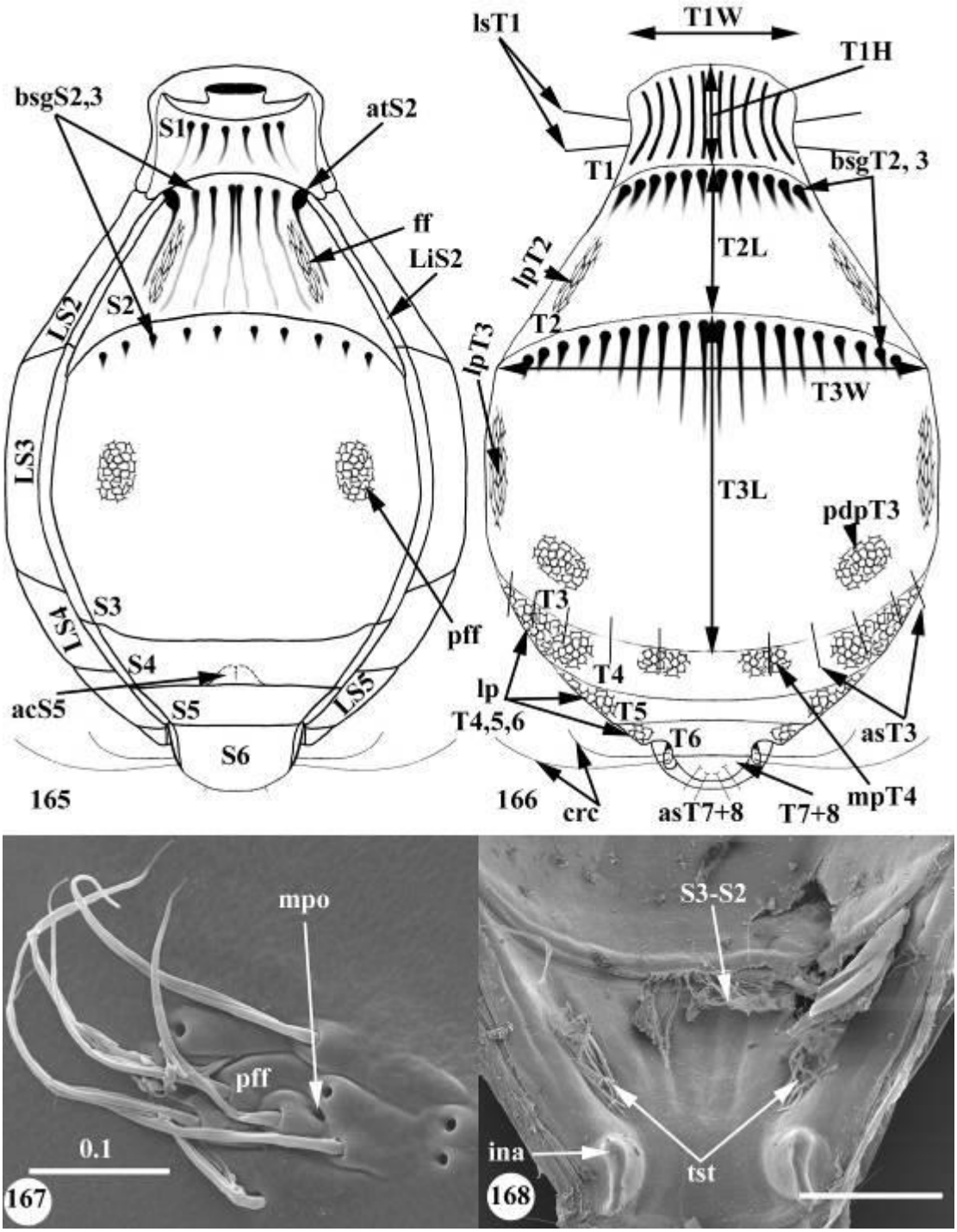
FIGURES 151-155. 151, 152, *Scelio sp.*, metapectal-propodeal complex median view; 153-155, *Archaeoteleia sp.*; 153, first metasomal segment, lateral view; 154, metasoma, anterior view; 155, first metasomal segment, anterior view.



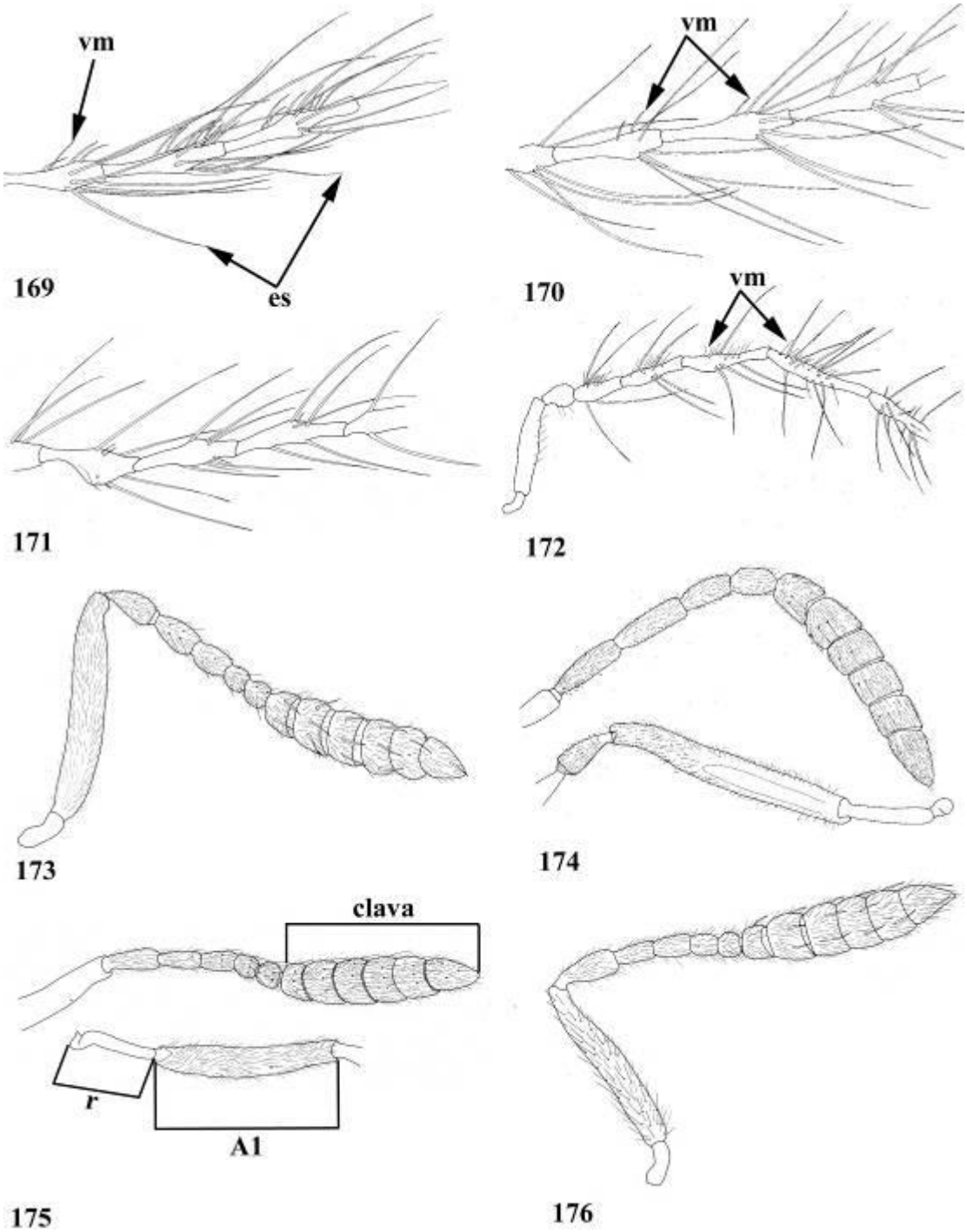
FIGURES 156-160. 156-157, schematized head of scelionids, ventral view; 158, *Vanhornia* sp., mesosoma, sagittal section; 159, Helorus sp., prontoum and mesopleuron, sagittal section; 160, Isocybus sp., mesopleuron, sagittal section.



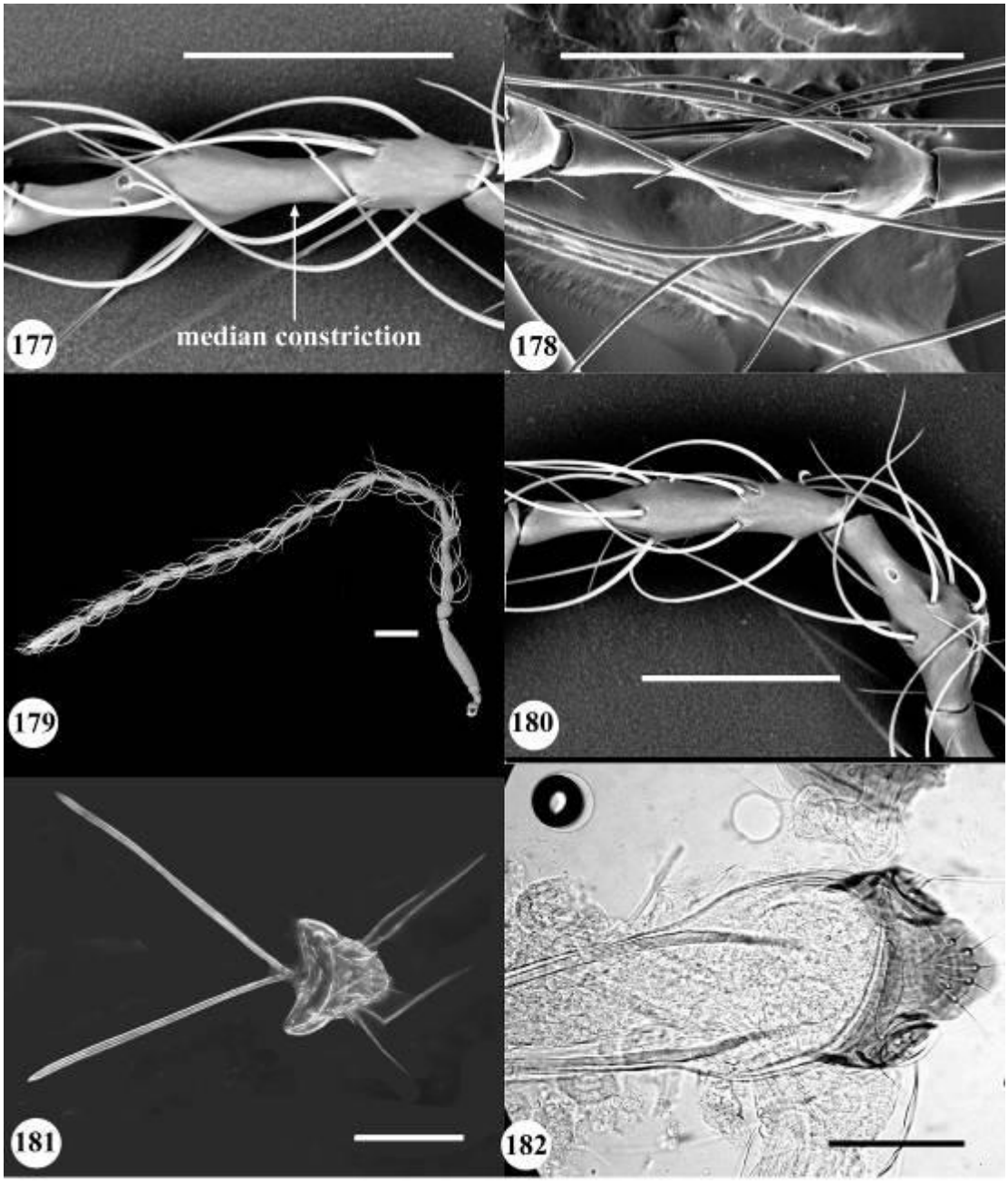
FIGURES 161-164. Generalized Teleasinae. 161, mesosoma, dorsal view; 162, head, dorsal view; 163, fore wing venation; 164, head, anterior view.



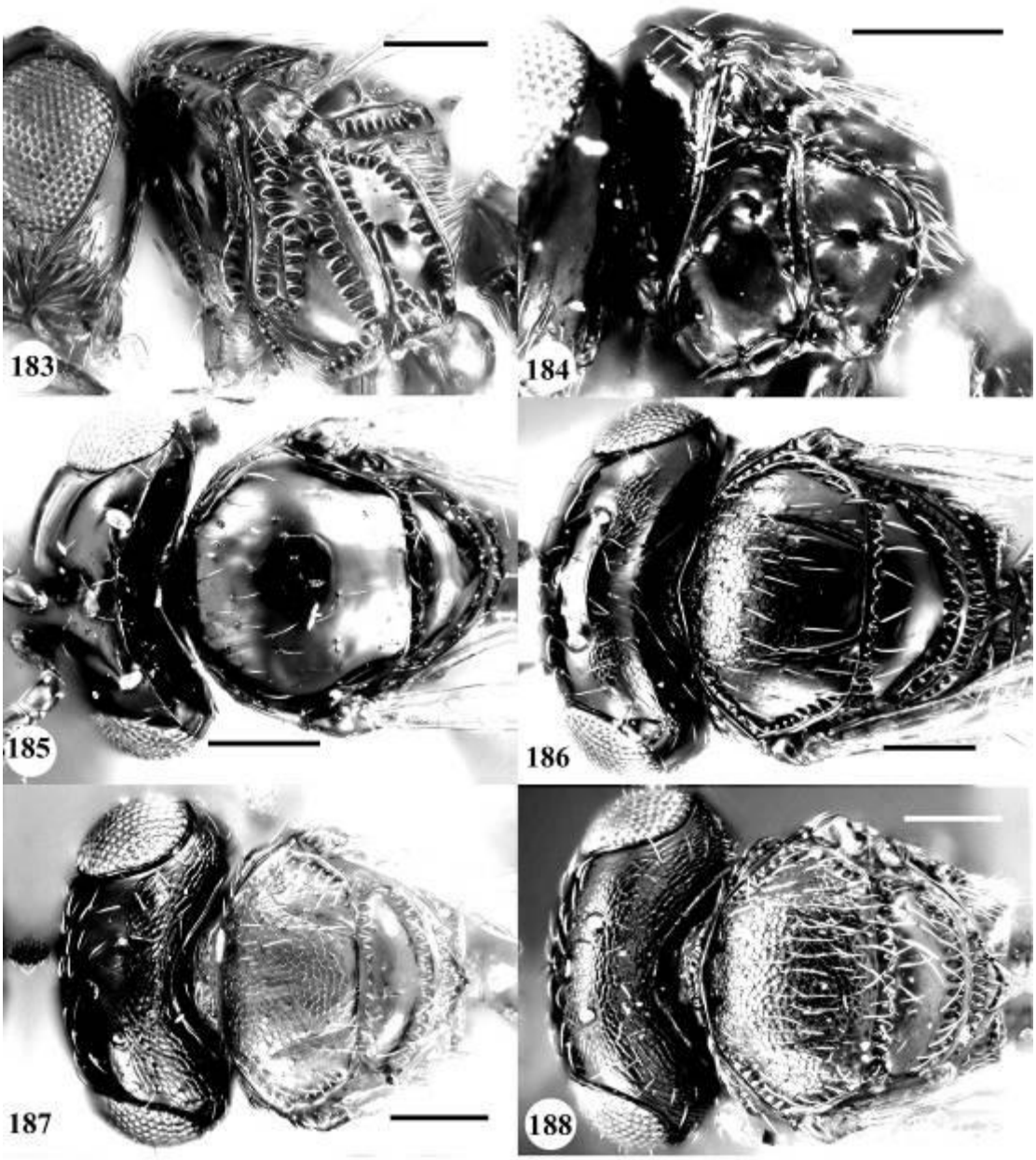
FIGURES 165-168. 165, 166 generalized Teleasinae. 165, metasoma ventral view; 166, metasoma, dorsal view; 167, *Xenomerus ergenna* Walker, posterior felt field; 168, *Trimorus nitidulus* Thomson 1859, S2 and anterior S3, dorsal (internal) view. Scale bar=0.1mm



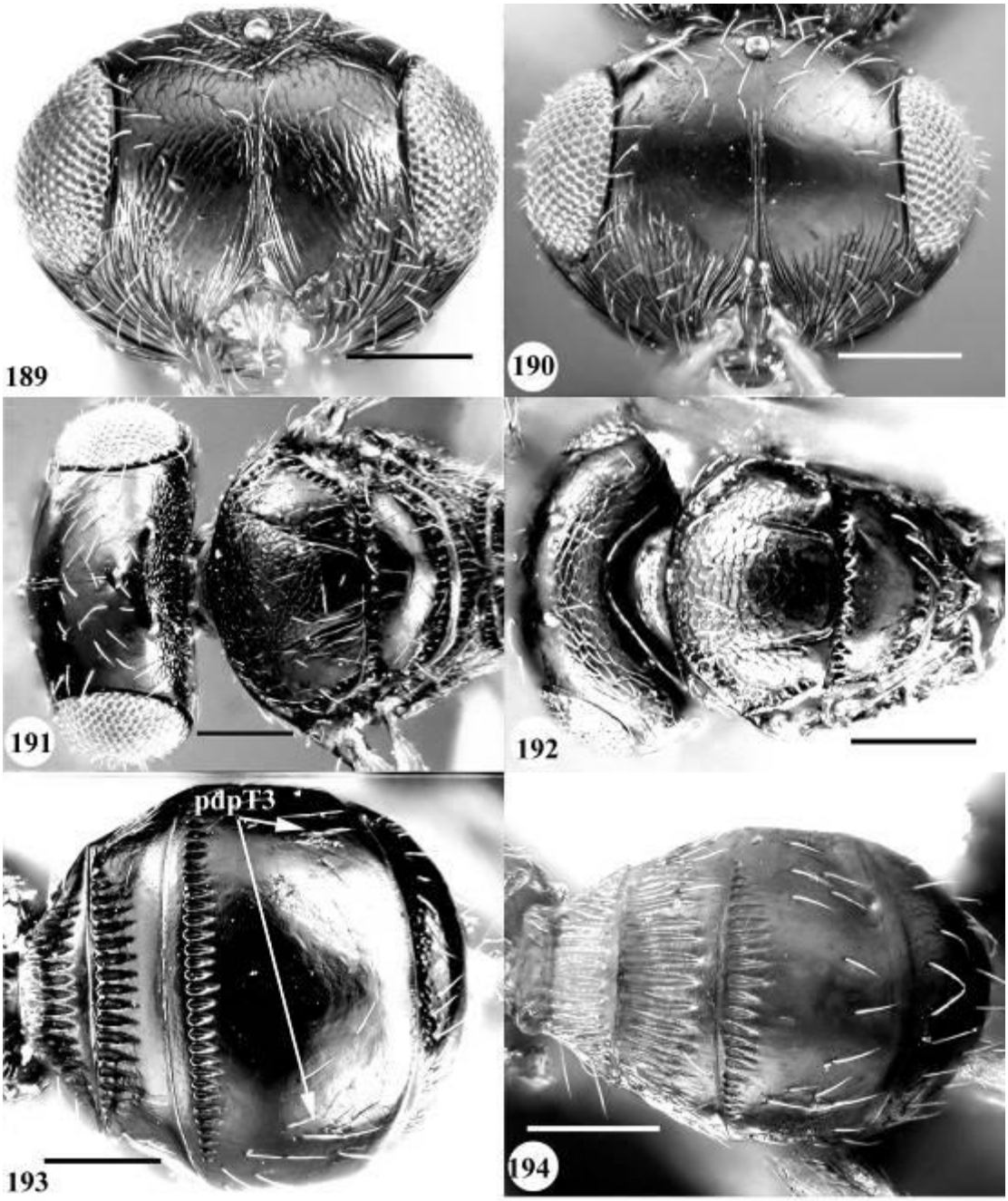
FIGURES 169-176. 169, *Xenomerus varipes* Dodd., male, A3-A5; 170, *X. laticeps* Dodd, male, A3-A6; 171, *X. fragilis* sp. n., male, A4-A8; 172, *X. ochraceus* sp. n., male, A1-A7; 173-176, female antennae. 173, *X. halteratus* sp. n.; 174, *X. rugifrons* sp. n.; 175, *X. aureipes* sp. n.; 176, *X. kalocsai* sp. n.



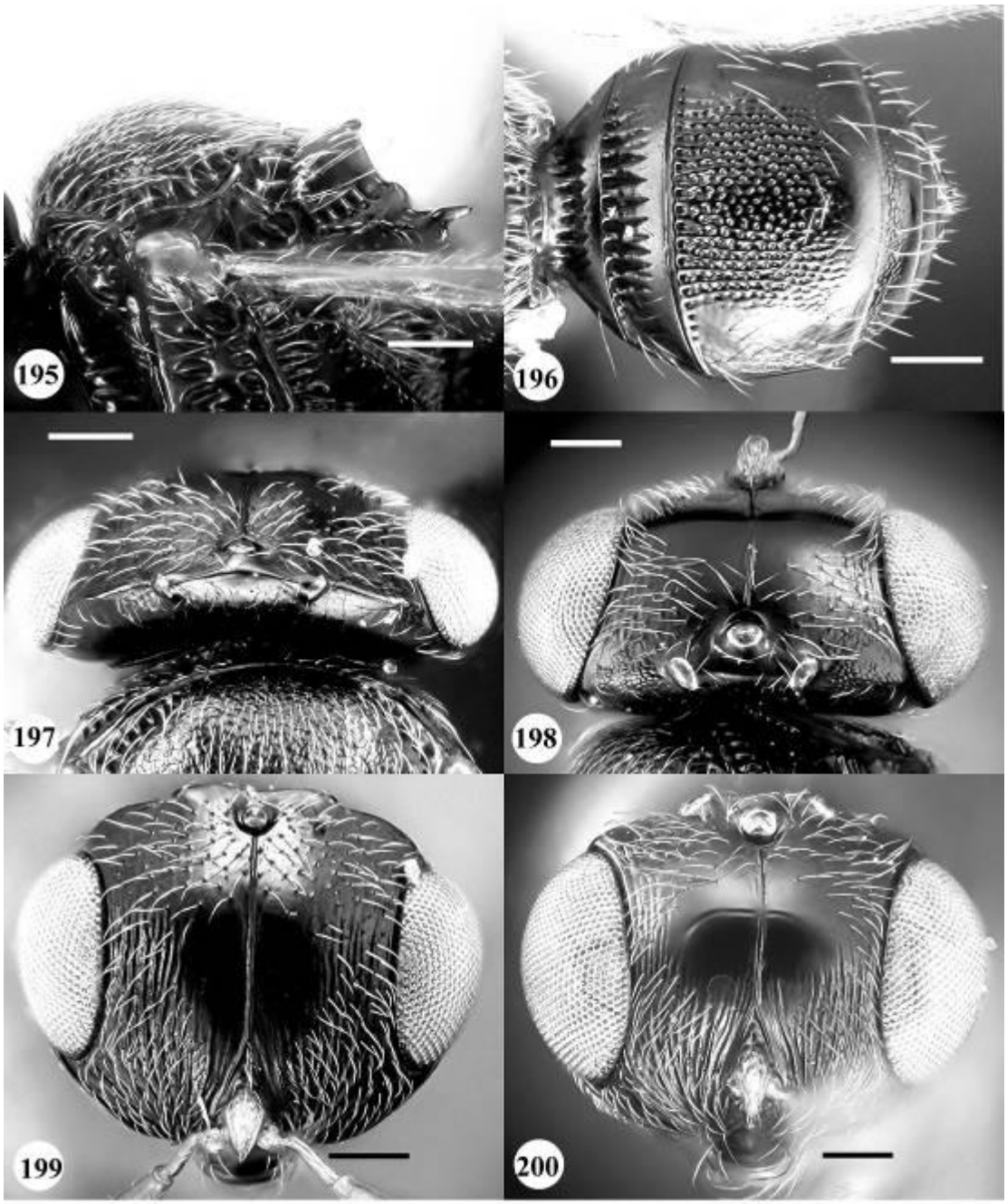
FIGURES 177-182. 17, *Xenomerus melleus* sp. n., male, A7; 178, *X. ergenna* Walker, male, A6; 179, *X. melleus* sp. n., male, antenna; 180, *X. melleus* sp. n., male, A5, A6; 181, *Gen. n*, T7+8; 182, *Trimorus pallipes* Thomson 1859, T7+8.



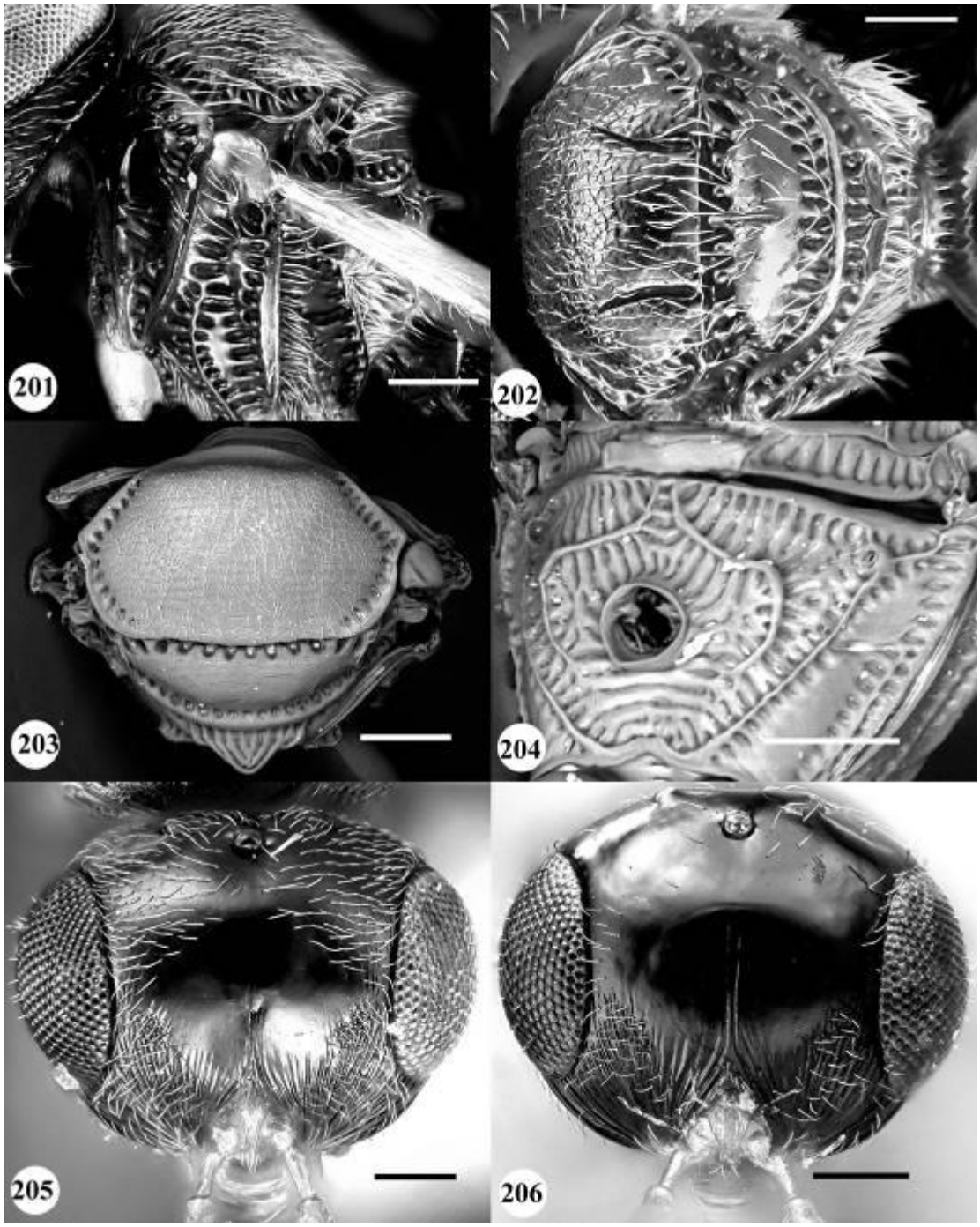
FIGURES 183-188. 183, *Xenomerus ergenna* Walker, mesosoma and head, lateral view; 184, *X. vanharteni*, sp. n., mesosoma and head, lateral view; 185, *X. vanharteni*, sp. n., mesosoma and head, dorsal view; 186, *X. ergenna* Walker, mesosoma and head, dorsal view; 187, *X. buccatus* Kononova & Kozlov, mesosoma and head, dorsal view; 188, *X. calligetus* Kononova & Kozlov, head and mesosoma, dorsal view. Scale bar=0.1 mm.



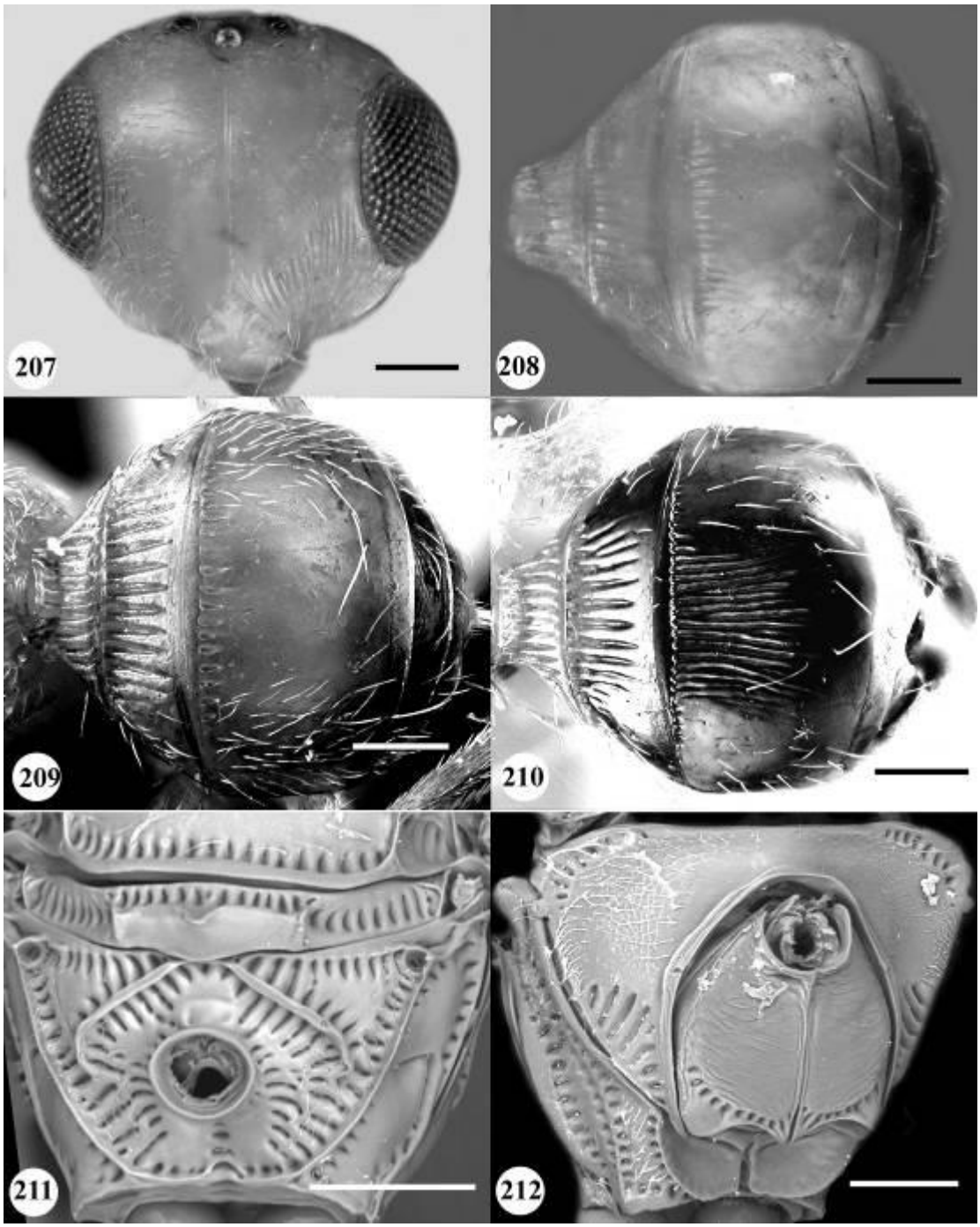
FIGURES 189-194. 189, *Xenomerus calligetus* Kononova & Kozlov, head, anterior view; 190, *X. canariensis* Huggert, head, anterior view; 191, *X. canariensis* Huggert, head and mesosoma, dorsal view; 192, *X. cornutus* Kononova & Kozlov, head and mesosoma, dorsal view; 193, *X. canariensis* Huggert, metasoma, dorsal view; 194, *X. cornutus* Kononova & Kozlov, metasoma, dorsal view. Scale bar=0.1 mm.



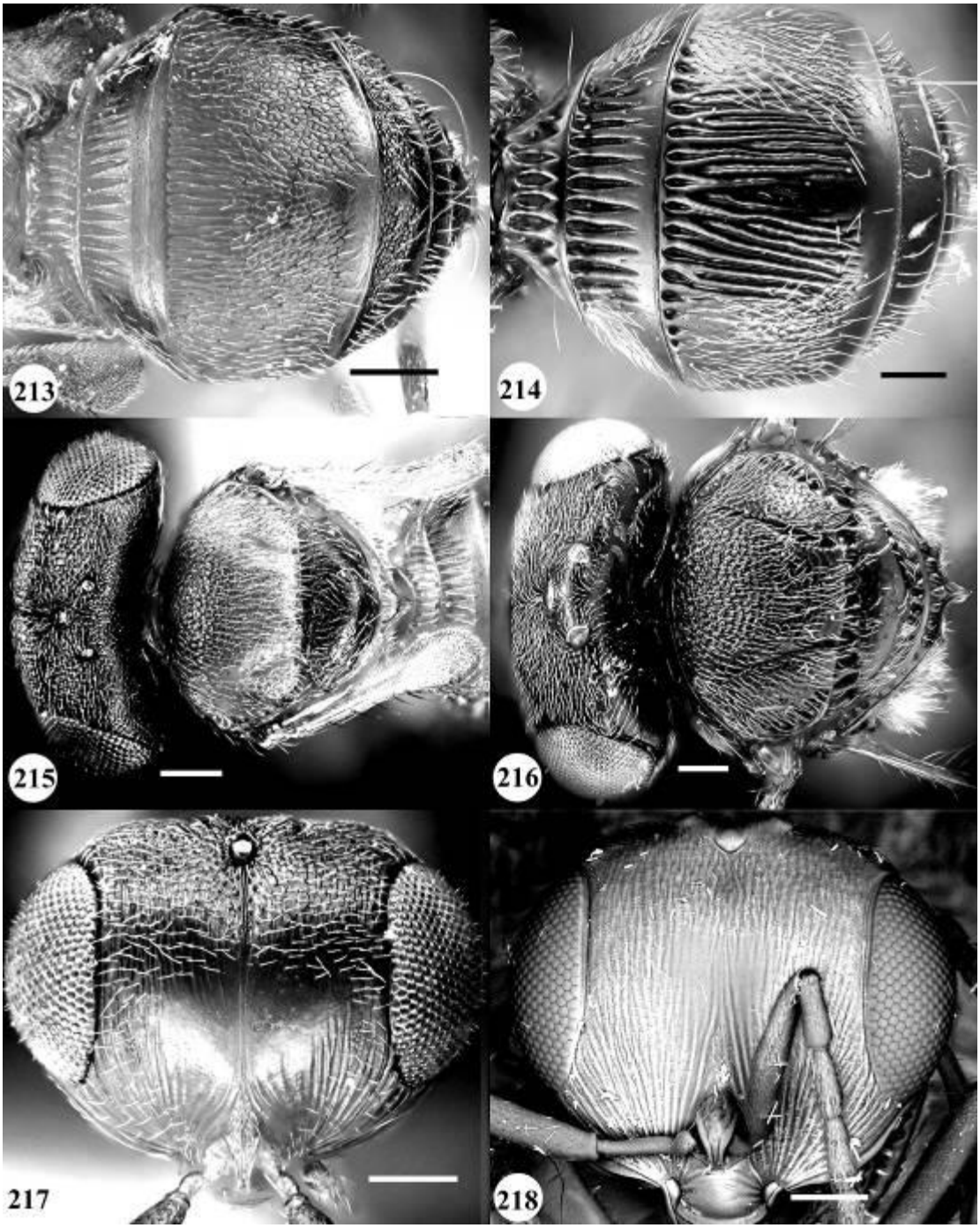
FIGURES 195-200. 195, *Xenomerus spinosus*, sp. n., mesonotum, lateral view; 196, *X. armatus*, sp. n., metasoma, dorsal view; 197, *X. armatus*, sp. n., head, dorsal view; 198, *X. spinosus*, sp. n., head, dorsal view; 199, *X. armatus*, sp. n., head, anterior view; 200, *X. spinosus*, sp. n., head, anterior view. Scale bar=0.1 mm.



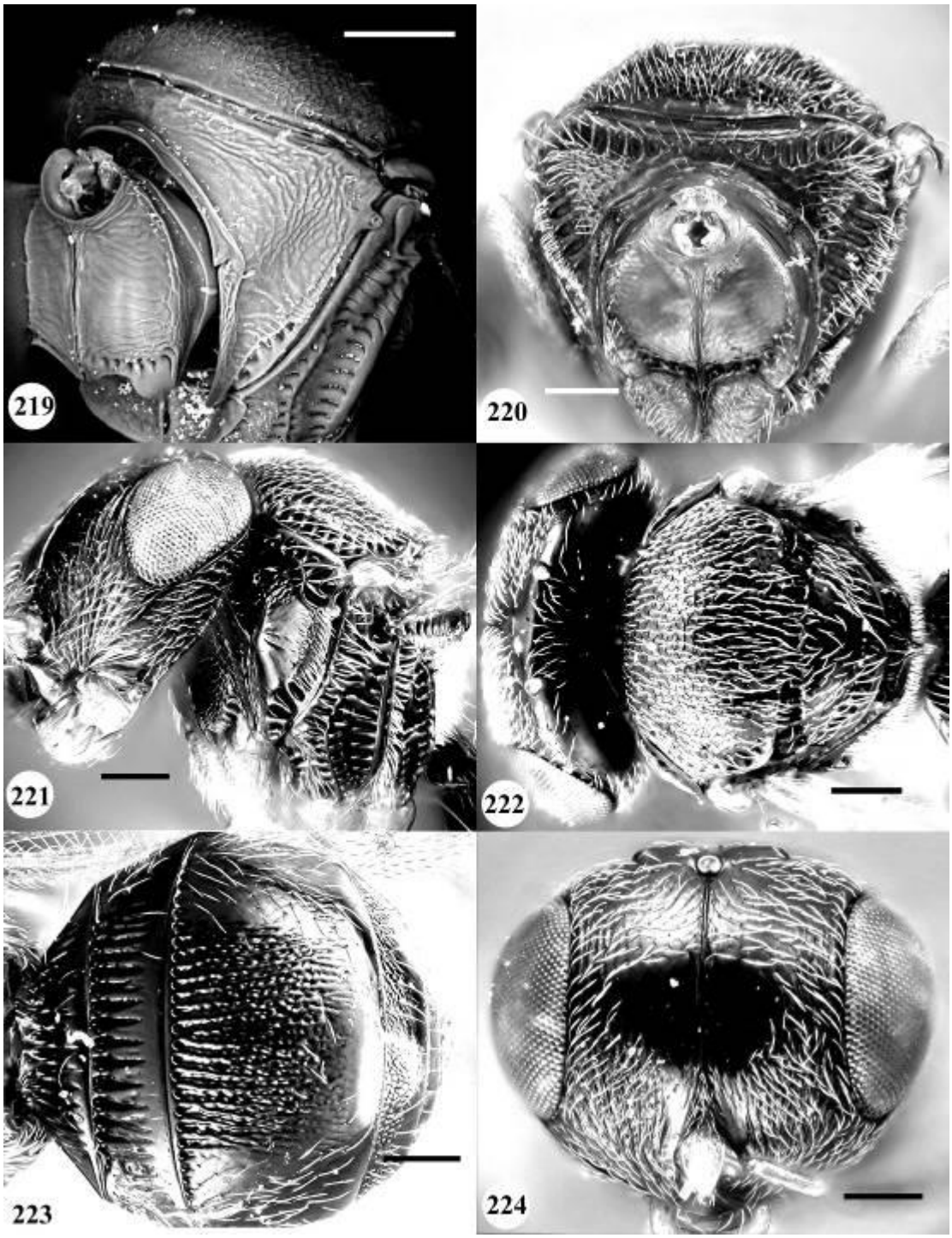
FIGURES 201-206. 201, *Xenomerus spinosus* sp. n., mesosoma, lateral view; 202, *X. armatus*, mesosoma, dorsal view; 203, *X. ochraceus*, sp. n., mesosoma, dorsal view; 204, *X. ochraceus*, sp. n., propodeum, posterolateral view; 205, *X. ochraceus*, sp. n., head, anterior view; 206, *X,. guinensis*, sp. n., head, anterior view. Scale bar=0.1 mm.



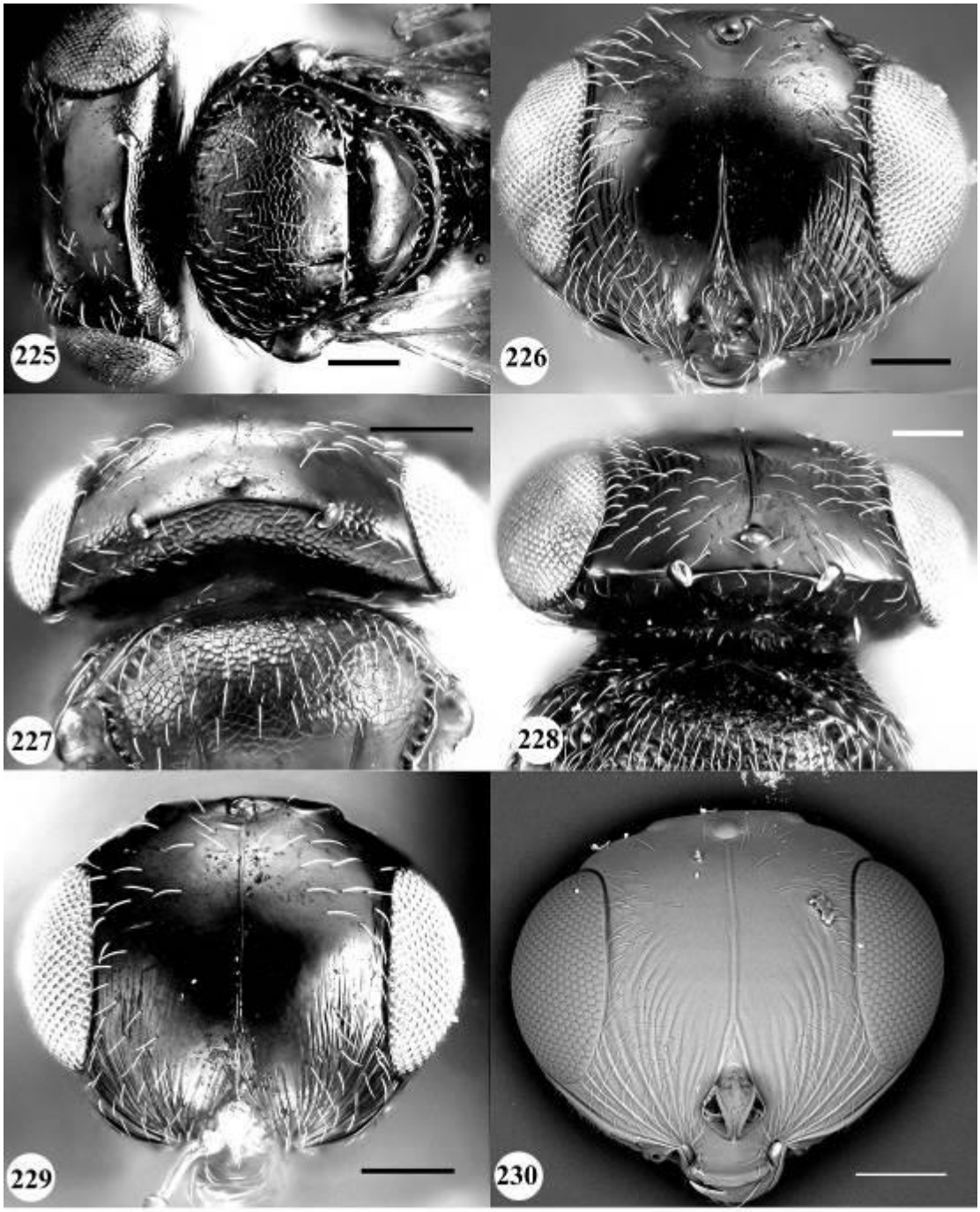
FIGURES 207-212. 47, *Xenomerus yamagishii* sp. n., head, anterior view; 208, *X. yamagishii* sp. n., metasoma, dorsal view; 209, *X. ochraceus* sp. n., metasoma, dorsal view; 210, *X. guinensis*, sp. n., metasoma, dorsal view; 211, *X. ergenna* Walker, mesosoma, posterior view; 212, *X. ochraceus*, sp. n., mesosoma, anterolateral view. Scale bar=0.1mm.



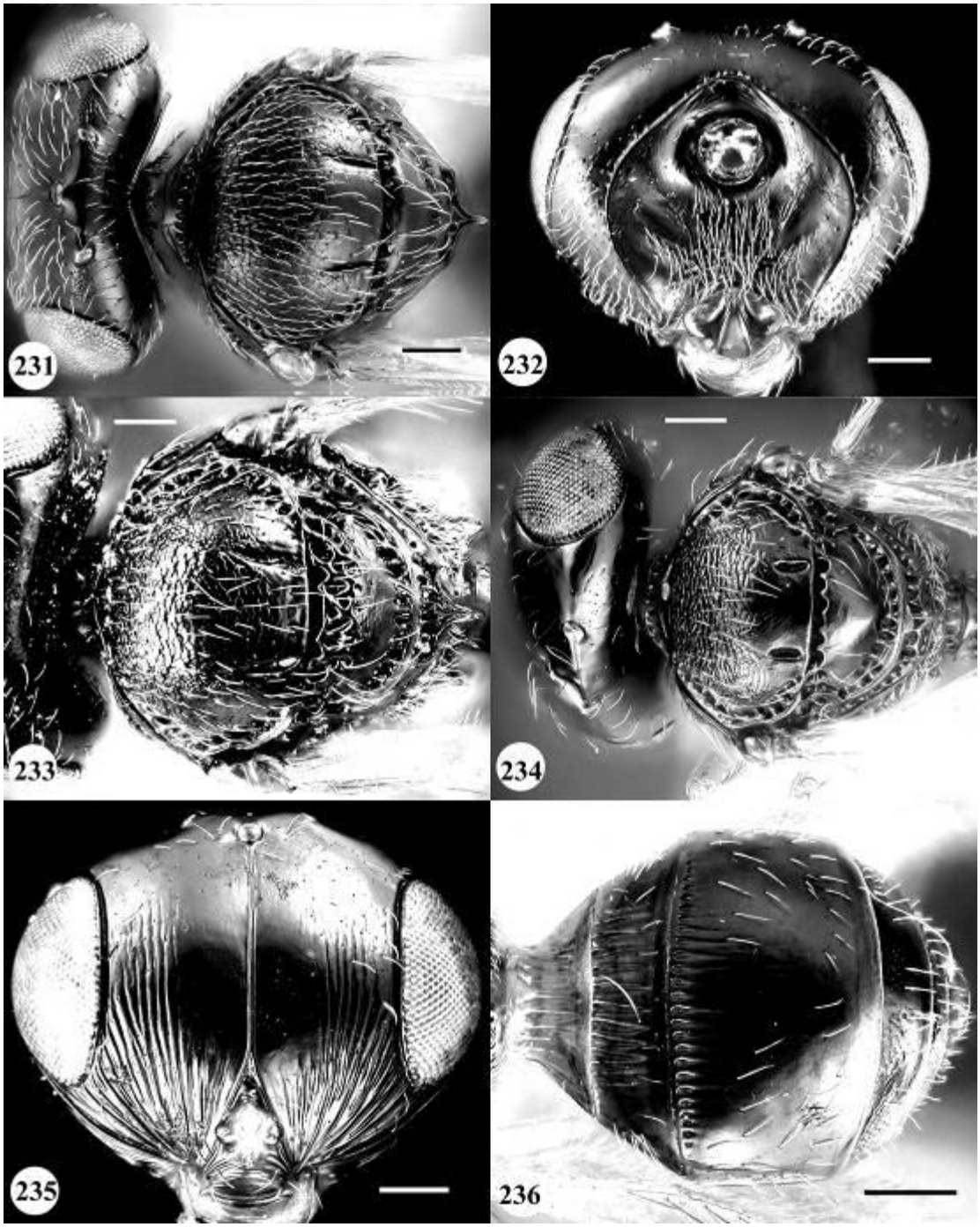
FIGURES 213-218. 213, *Xenomerus halteratus*, sp. n., metasoma, dorsal view; 214, *X. rugifrons*, sp. n., metasoma, dorsal view; 215, *X. halteratus*, sp. n., head and mesosoma, dorsal view; 216, *X. armatus*, sp. n., head and mesosoma, dorsal view; 217, *X. halteratus*, sp. n., head anterior view; 218, *X. armatus*, sp. n., head, anterior view. Scale bar=0.1mm.



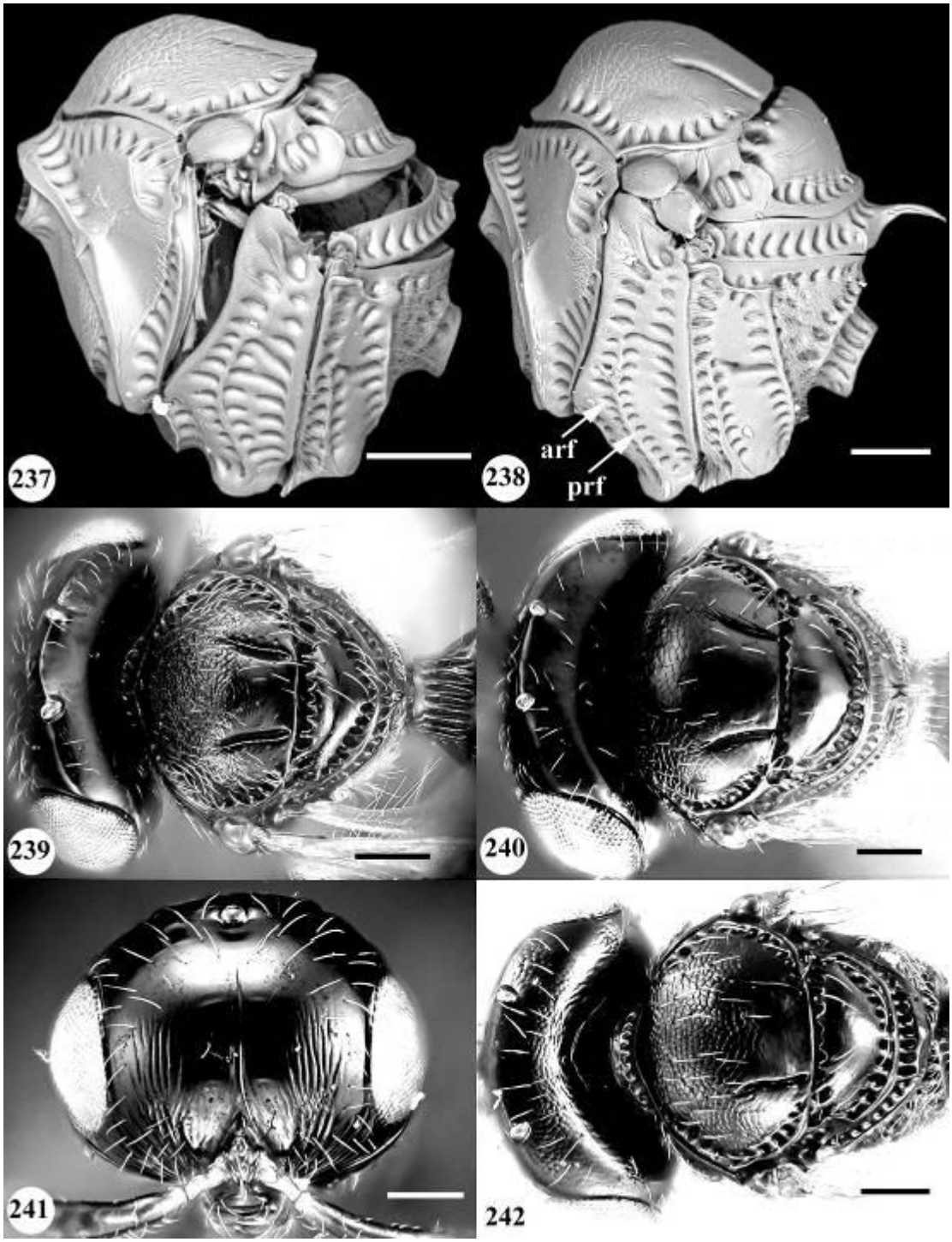
FIGURES 219-224. 219, *Xenomerus halteratus*, sp. n., mesosoma, anteroventral view; 220, *X. rugifrons*, sp. n., mesosoma, anterior view; 221, *X. comatus*, sp. n., head and mesosoma, lateral view; 222 *X. comatus*, sp. n., head and mesosoma, dorsal view; 223, *X. comatus*, sp. n., metasoma, dorsal view; 224, *X. comatus*, sp. n., head, anterior view. Scale bar=0.1mm.



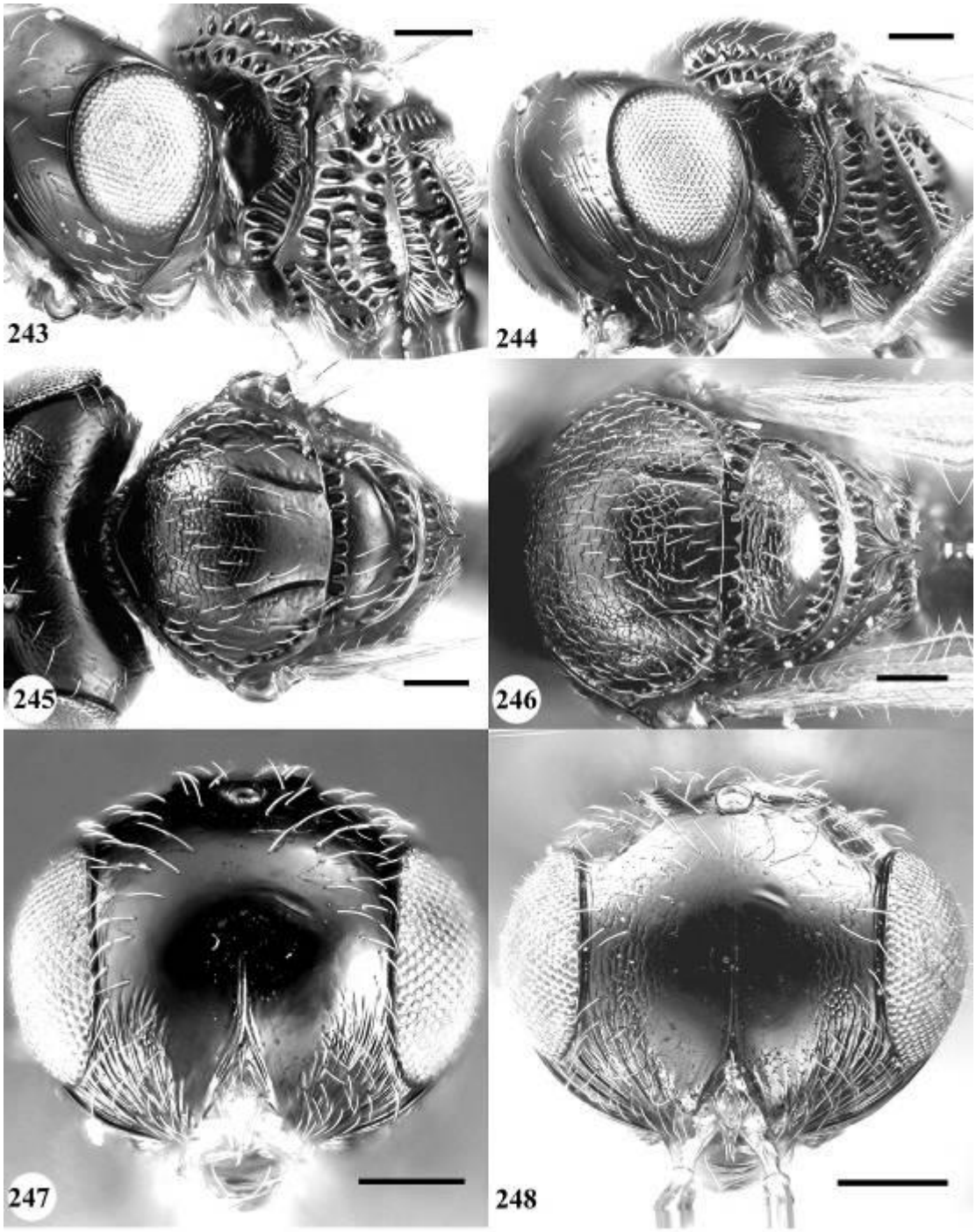
FIGURES 225-230. 225, *Xenomerus watshami*, sp. n., head and mesosoma, dorsal view; 226, *X. watshami*, sp. n., head, anterior view; 227, *X. paraorientalis*, sp. n., head and anterior mesosoma, dorsal view; 228, *X. orientalis*, sp. n., head and anterior mesosoma, dorsal view; 229, *X. paraorientalis*, sp. n., head, anterior view; 230, *X. orientalis*, sp. n., head, anterior view. Scale bar= 0.1 mm.



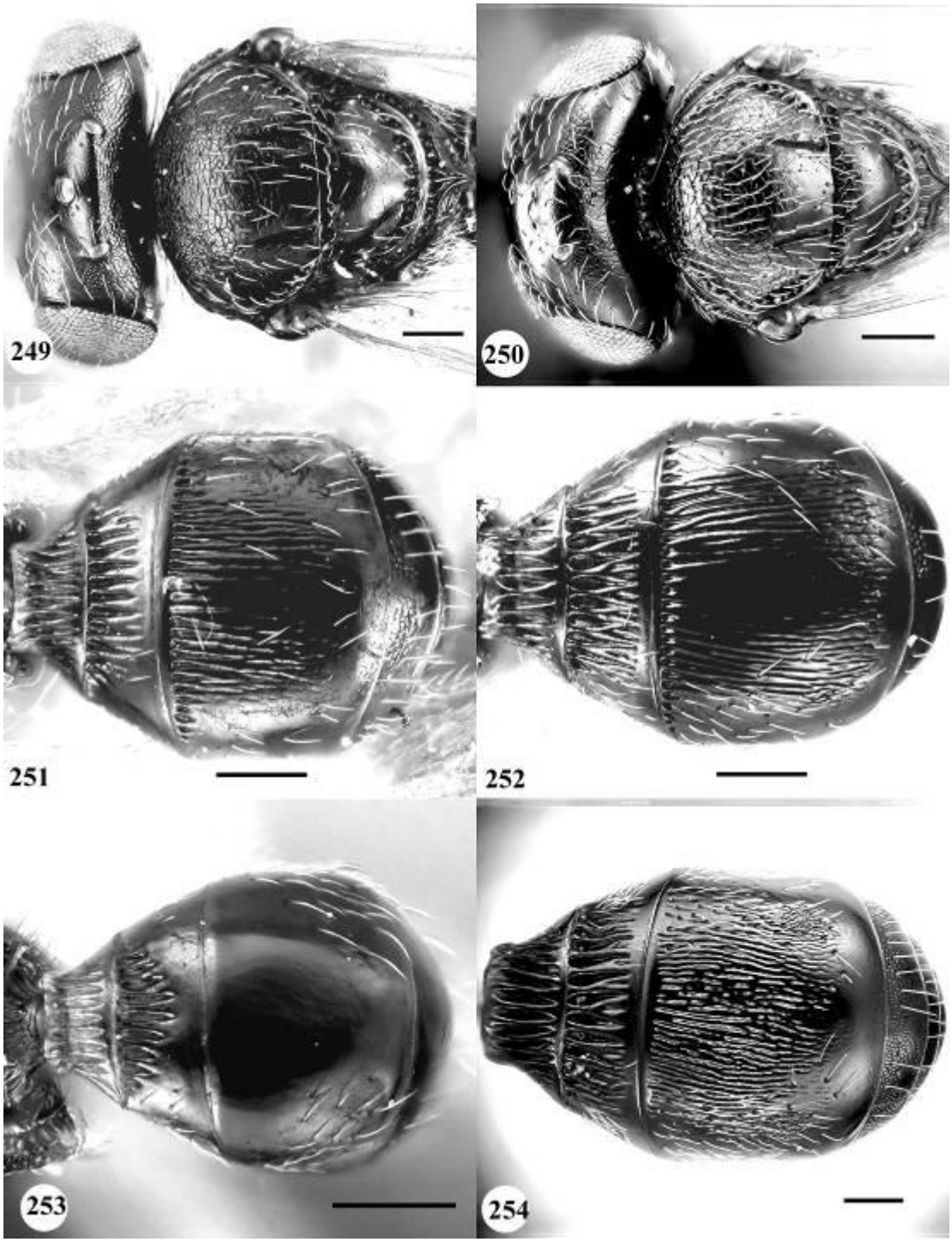
FIGURES 231-236. 231, *Xenomerus aureipes*, sp. n., head and mesosoma, dorsal view; 232, *X. aureipes*, sp. n., head, posterior view; 233, *X. scutellatus*, sp. n., mesosoma, dorsal view; 234, *X. melikai*, sp. n., head and mesosoma, dorsal view; 235, *X. varipes* Dodd, head, anterior view; 236, *X. laticeps* Dodd, metasoma, dorsal view. Scale bar= 0.1 mm.



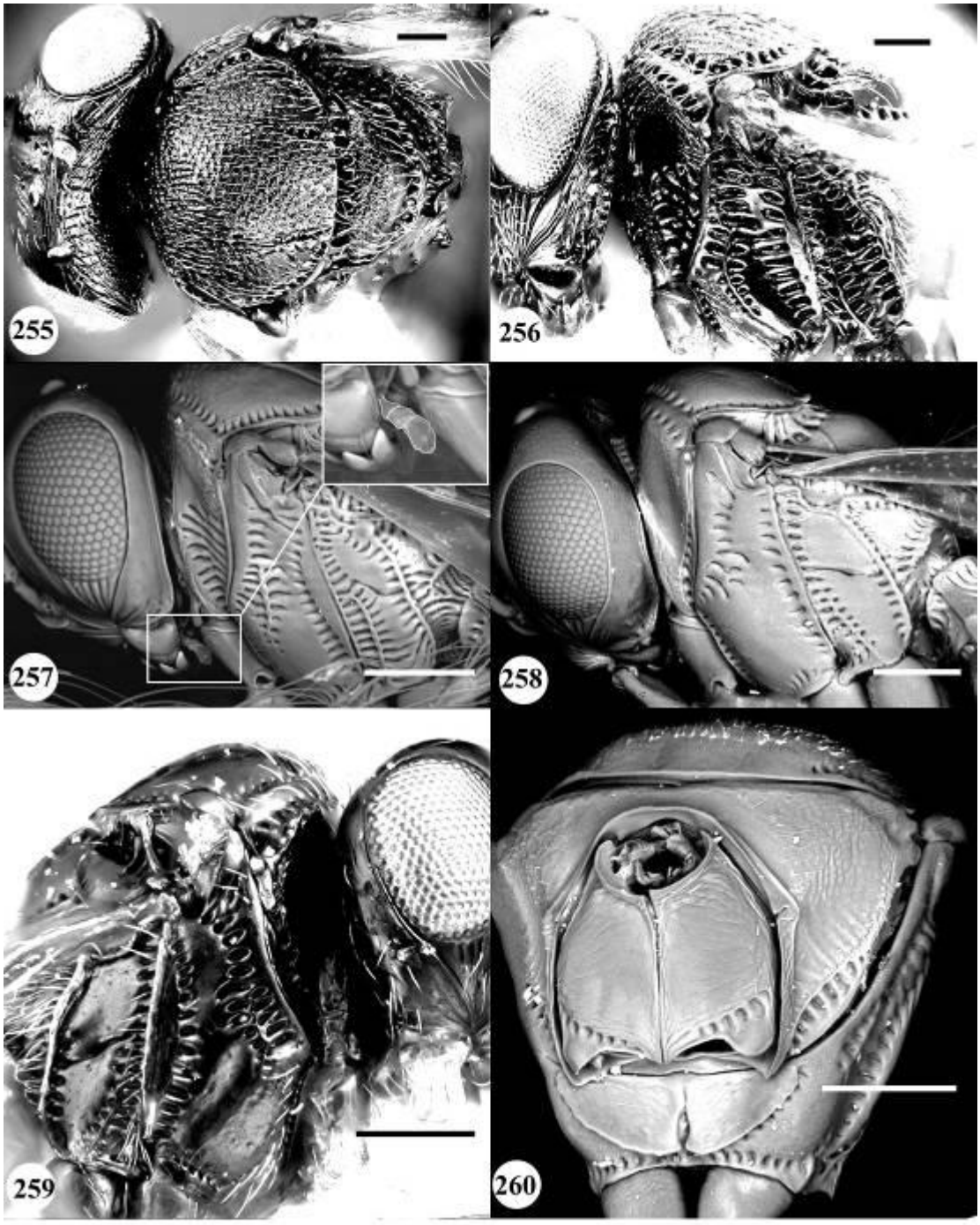
FIGURES 237-242. 237, *Xenomerus varipes* Dodd, mesosoma, lateral view; 238, *X. laticeps* Dodd, mesosoma, lateral view; 239, *X. varipes* Dodd, head and mesosoma, dorsal view; 240, *X. laticeps* Dodd, head and mesosoma, dorsal view; 241, *X. gloriosus*, sp. n., head, anterior view; 242, *X. gloriosus*, sp. n., head and mesosoma, dorsal view. Scale bar= 0.1 mm.



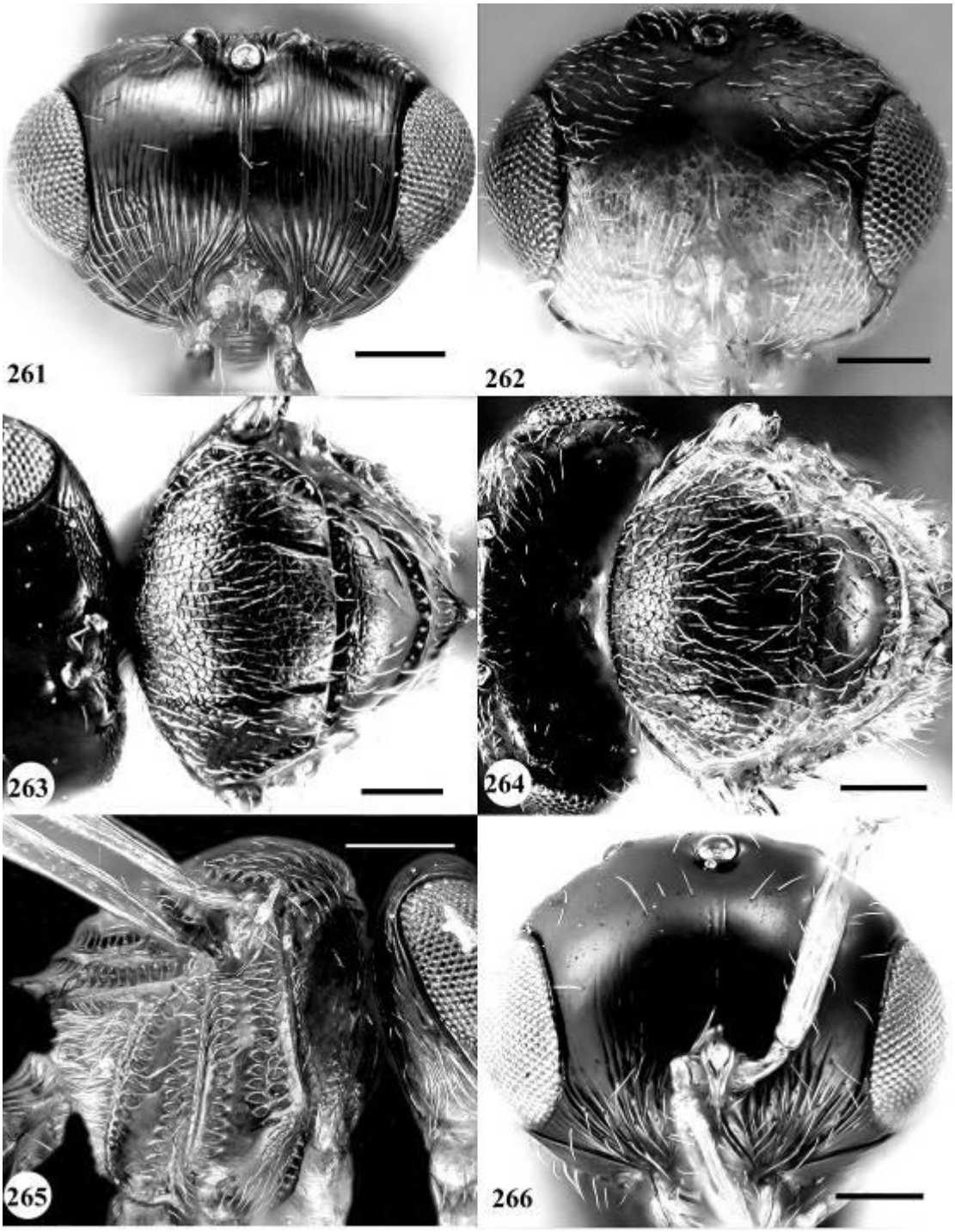
FIGURES 243-248. 243, *Xenomerus gloriosus*, sp. n., head and mesosoma, anterolateral view; 244, *X. bickeli*, sp. n., head and mesosoma, anterolateral view; 245, *X. bickeli*, head and mesosoma, dorsal view; 246, *X. malawi*, sp. n., mesosoma, dorsal view; 247, *X. feehani*, sp. n., head, anterior view; 248, *X. kalocsai*, sp. n., head, anterior view. Scale bar= 0.1 mm.



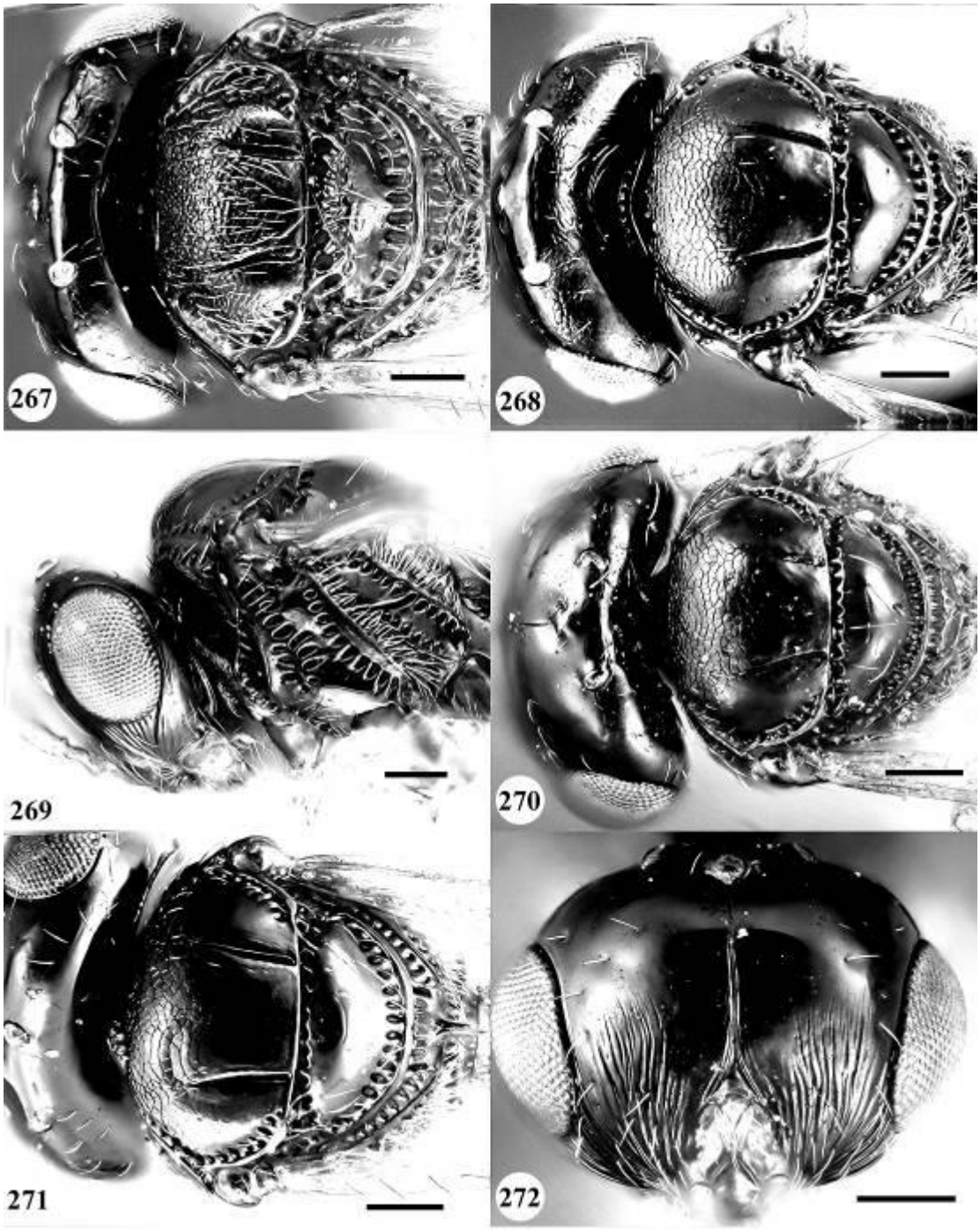
FIGURES 249-254. 249, *Xenomerus kalocsai*, sp. n., head and mesosoma, dorsal view; 250, *X. feehani*, sp. n., head and mesosoma, dorsal view; 251. *X. kalocsai*, sp. n., metasoma, dorsal view; 252, *X. feehani*, sp. n., metasoma, dorsal view; 253, *X. noyesi*, sp. n., metasoma, dorsal view; 254, *X. darlingi*, sp. n., metasoma, dorsal view. Scale bar= 0.1 mm.



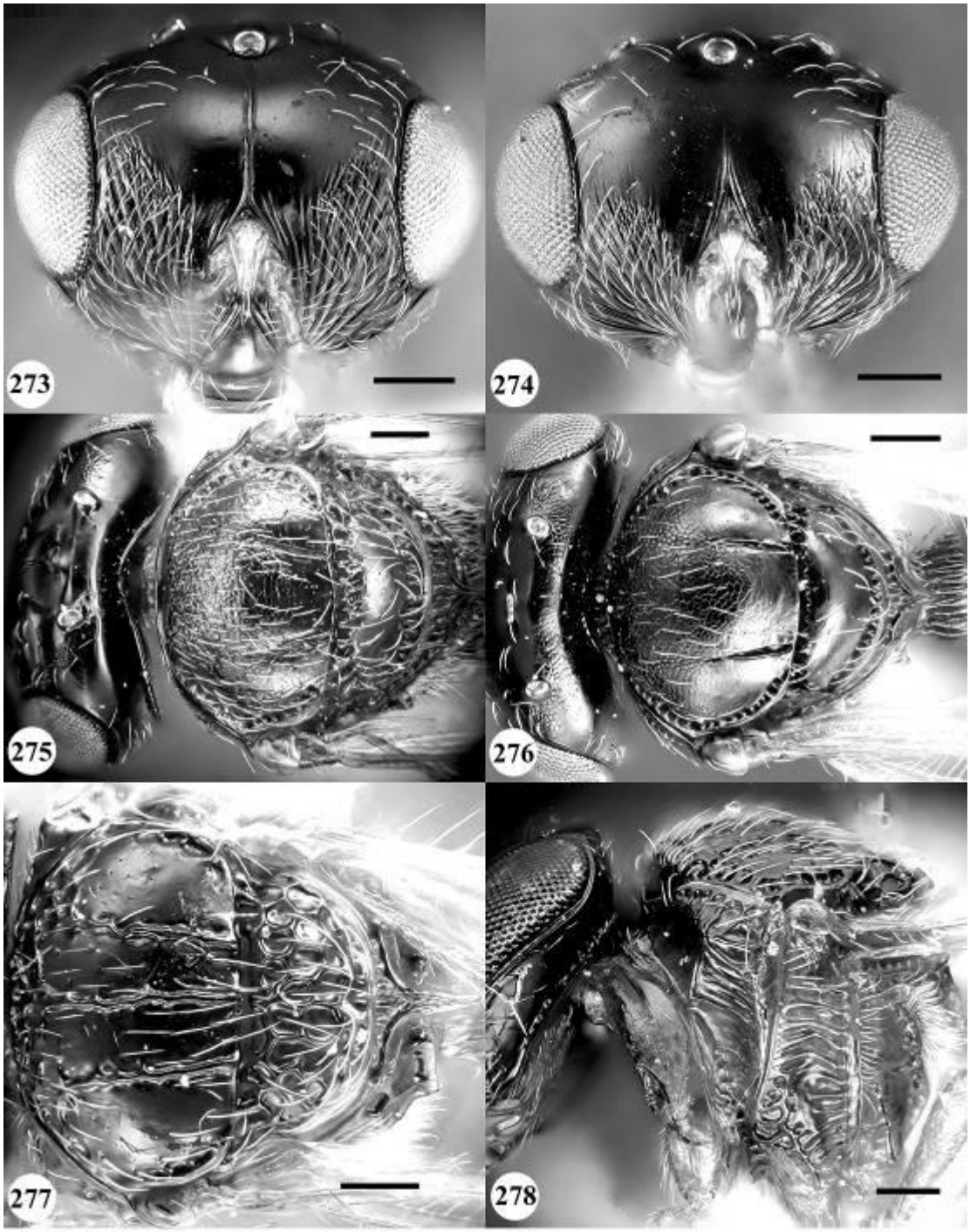
FIGURES 255-260. 255, *Xenomerus darlingi*, sp. n., head and mesosoma, dorsal view; 256, *X. darlingi*, sp. n., head and mesosoma, lateral view; 257, *X. noyesi*, sp. n., head and mesosoma, lateral view; 258, *X. madag*, sp. n., head and mesosoma, lateral view; 259, *X. fulleri*, sp. n., head and mesosoma, lateral view; 260, *X. melleus*, sp. n., mesosoma, anterolateral view. Scale bar= 0.1 mm.



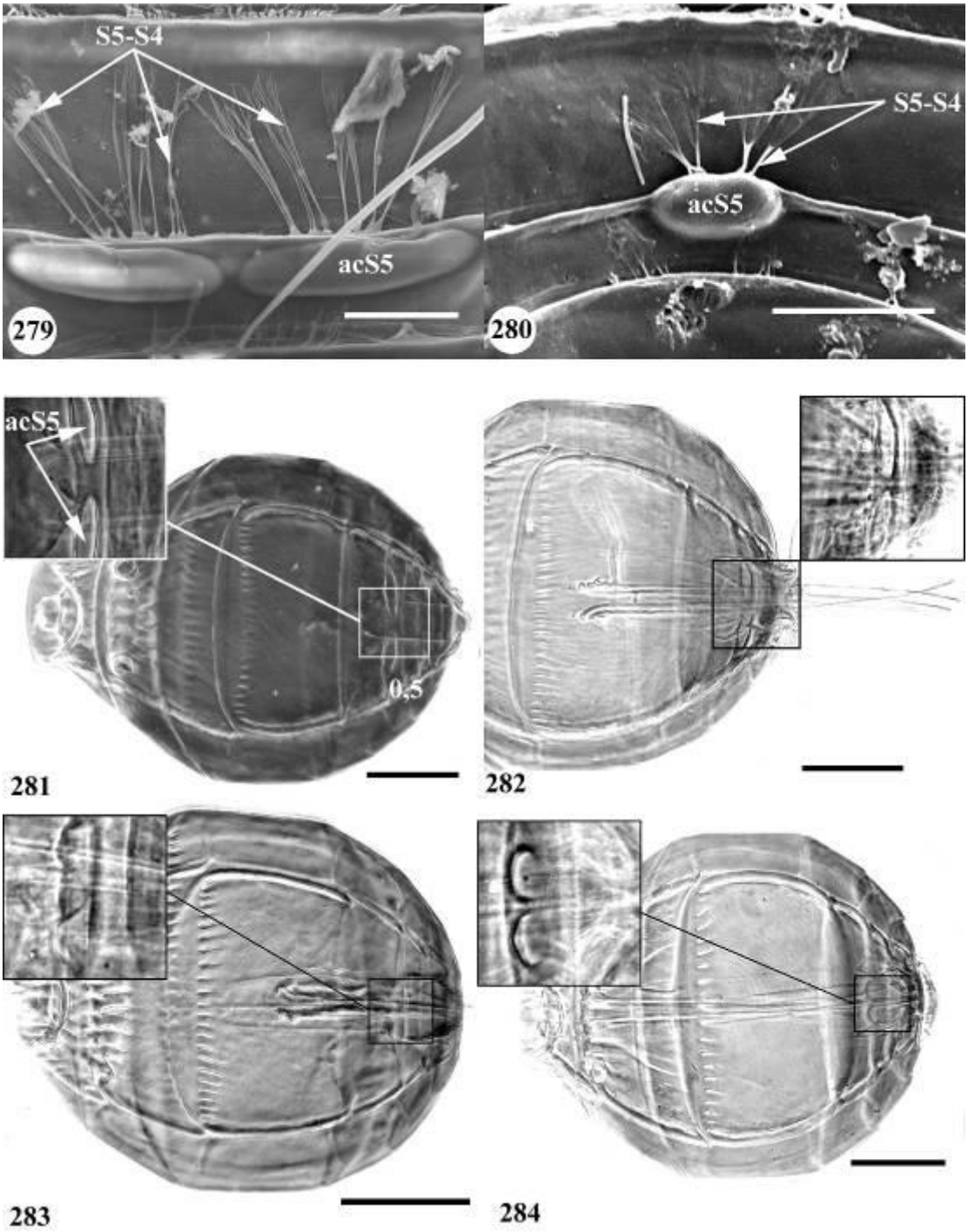
FIGURES 261-266. 261, *Xenomerus melleus*, sp. n., head, anterior view; 262, *X. ochraceus*, sp. n., head, anterior view; 263, *X. melleus*, sp. n., head and mesosoma, dorsal view; 264, *X. ochraceus*, sp. n., head and mesosoma, dorsal view; 265, *X. melleus* sp. n., mesosoma, lateral view; 266, *X. hilleri*, sp. n., head, anterior view. Scale bar= 0.1mm.



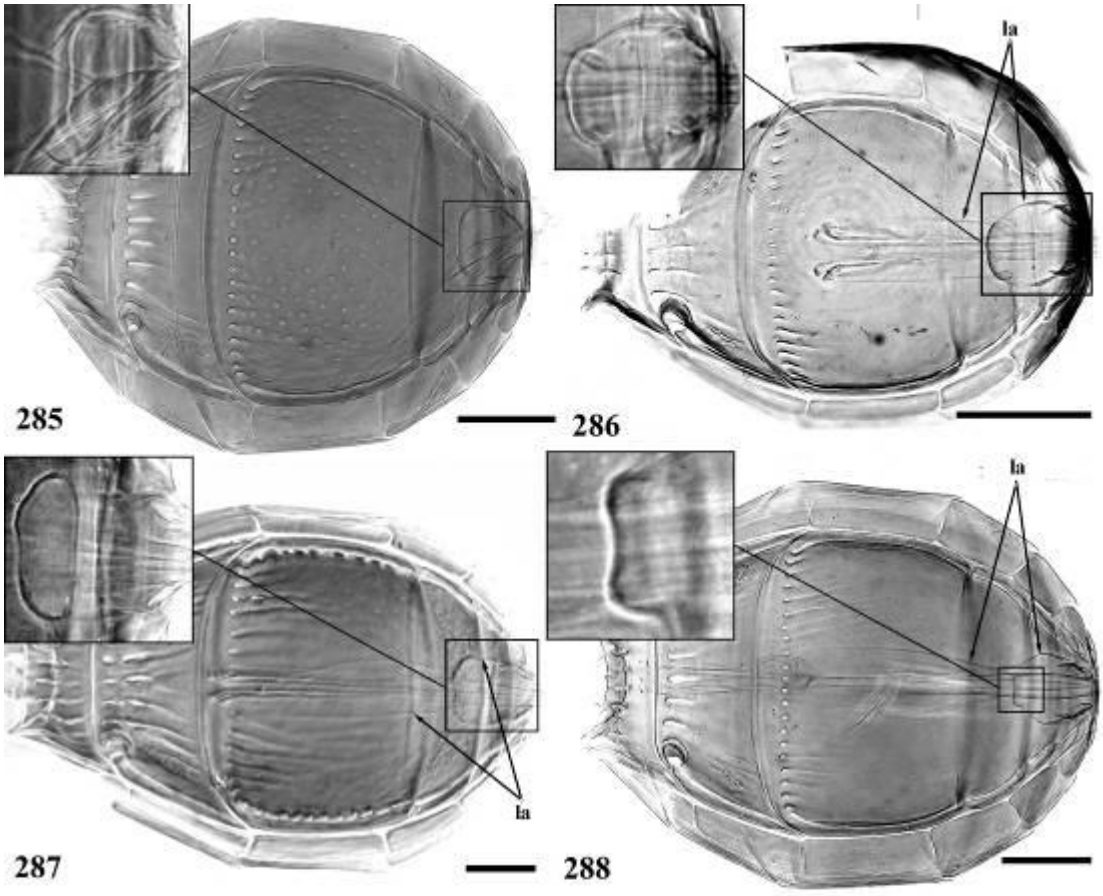
FIGURES 267-272. 267, *Xenomerus orientalis*, sp. n., head and mesosoma, dorsal view; 268, *X. hilleri*, sp. n., head and mesosoma, dorsal view; 269, *X. hilleri*, sp. n., head and mesosoma, lateral view; 270, *X. varipes*, sp. n., head and mesosoma, dorsal view; 271. *X. flavicornis*, sp. n., head and mesosoma, dorsal view; 272, *X. flavicornis*, sp. n., head, anterior view, Scale bar= 0.1 mm.



FIGURES 273-278. 273, *Xenomerus aureipes*, sp. n., head, anterior view; 274, *X. watshami*, sp. n., head, anterior view; 275, *X. aureipes*, head and mesosoma, dorsal view; 276, *X. watshami*, sp. n., head and mesosoma, dorsal view; 277, *Gen. n.*, mesosoma, dorsal view; 278, *Gen. n.*, mesosoma, lateral view. Scale bar= 0.1 mm.



FIGURES 279-284. 279, *Trimorus opacus* Thomson 1859, S4 and S5, dorsal (internal) view; 280, *Gen. n.,* S4, S5 and S6, internal view; 281, *Xenomerus melleus*, sp. n., metasoma, ventral view; 282, *X. halteratus*, sp. n., metasoma, ventral view; 283, *X. ergenna* Walker, metasoma, ventral view; 284, X. ochraceus, metasoma, ventral view. Scale bar= 0.1mm.



FIGURES 285-288. 285, *Xenomerus comatus*, sp. n., metasoma, ventral view; 286, *X. feehani*, sp. n., metasoma, ventral view; 287, *X. scutellatus*, sp. n., metasoma, ventral view; 288, *X. watshami*, sp. n., metasoma, ventral view. Scale bar=0.1mm.